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October 465

HIGH TIMES

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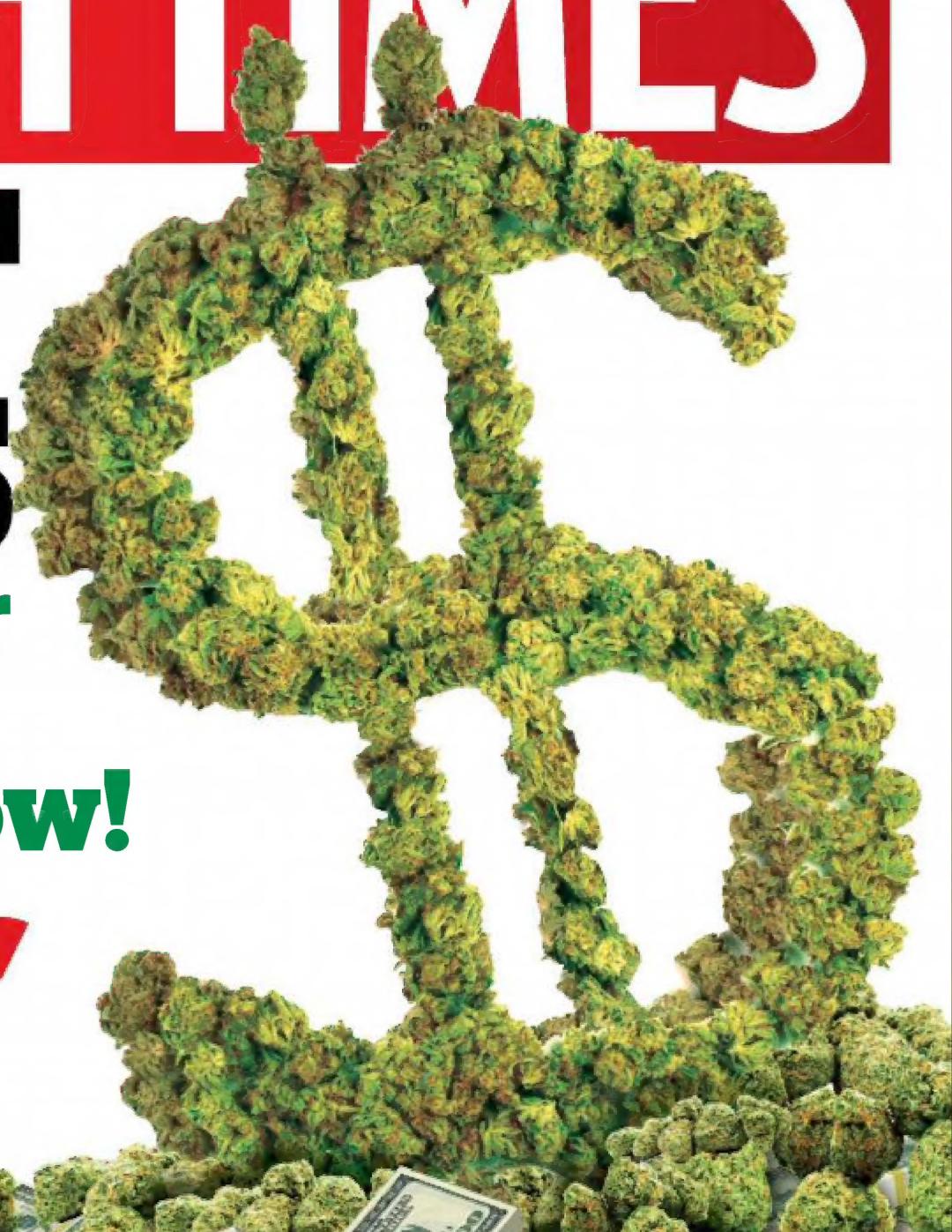
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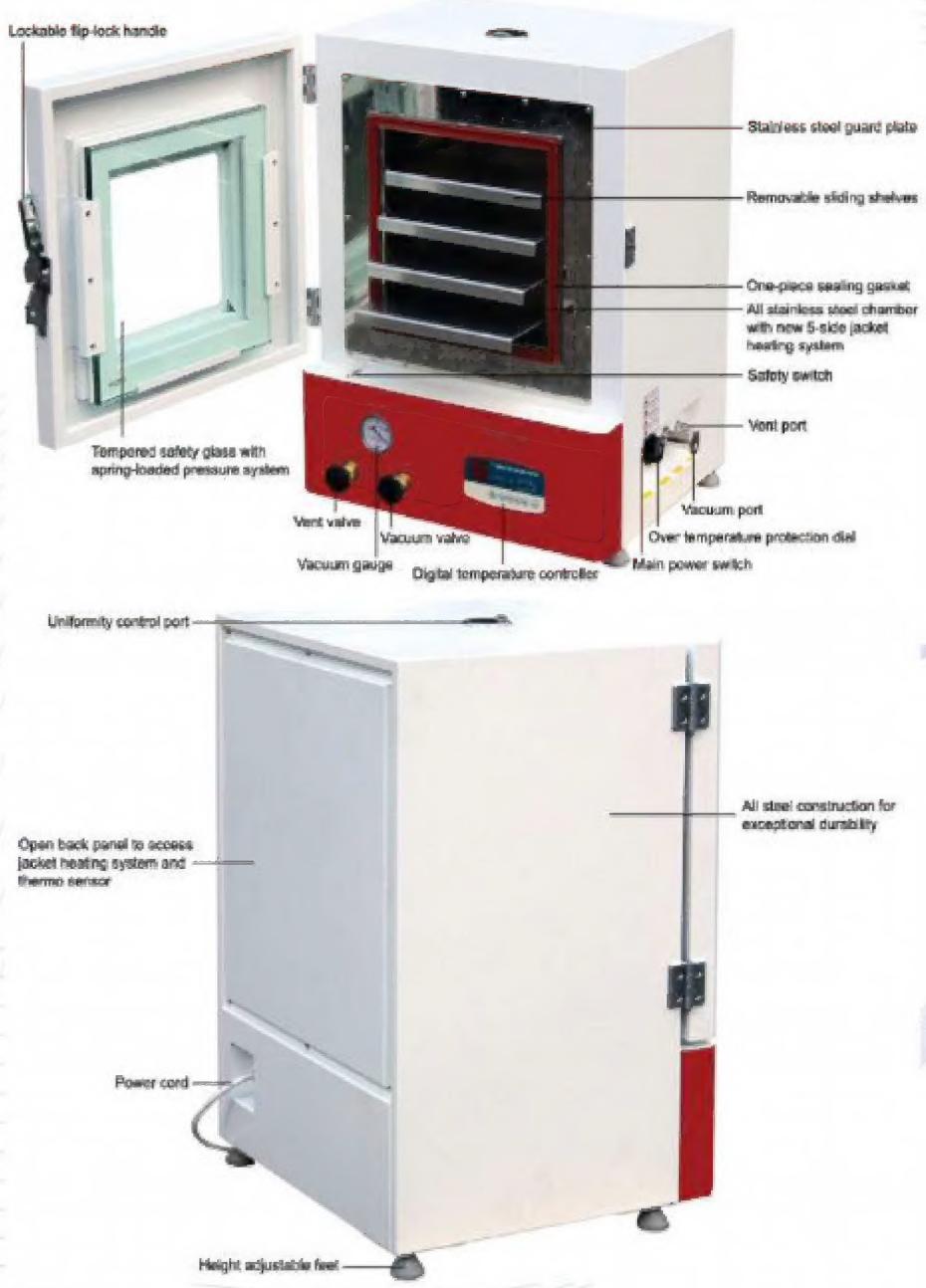
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"There are quite a few commercial hydroponic systems out there today, available in grow shops and online. Some of them come as turnkey solutions for indoor growrooms, while others are scalable and customizable depending on your needs."

—All Systems Grow, page 64

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47 The Booming Business of Buds

Legalization and the cannabis industry's exponential growth means there's no shortage of opportunity to get your foot in the door. Check out our top pot jobs and get started—now! *By Jen Bernstein*

56 From Clones to Concentrates

TC Labs has built its brand by working closely with Colorado's top cultivators, processing the very best plants into high-powered concentrates. *High Times* checks out the company's new, state-of-the-art "dab lab." *By Dan Skye*

64 All Systems Grow

Nico Escondido provides a comprehensive list of indoor grow systems and mediums to help you decide what will work best for your space and plants, complete with advanced grow tips for both hydro and soil setups.

82 The Last Alchemist

Alexander "Sasha" Shulgin, perhaps the greatest psychedelic research chemist of all time, died on June 2, 2014. *High Times* spoke with Sasha and visited his alchemical hideaway a week before his death. *By James Kent*

91 The Fury in Missouri

Last March, a cannabis-friendly Facebook post set off an Internet firestorm between dog lovers and a disgraced former cop. *By Chris Simunek*

102 High Times Interview: Bob Snodgrass

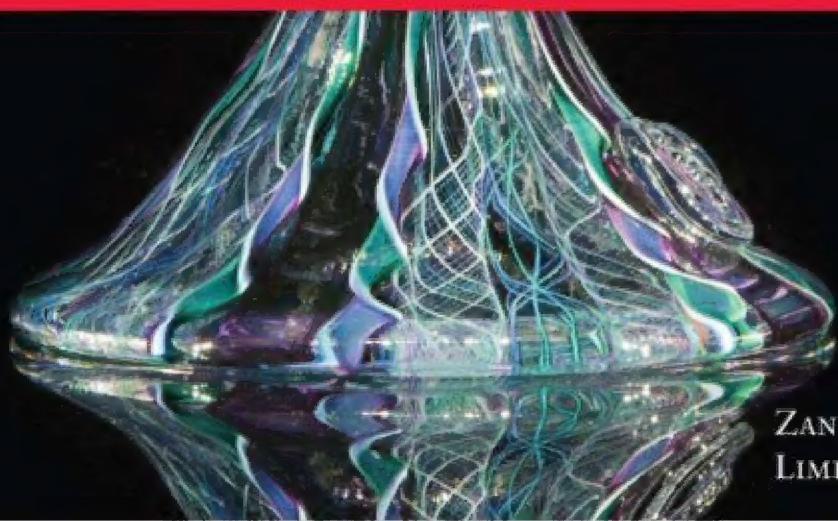
Call him the "Godfather of Glass." Glassblowers speak in reverential tones of Bob Snodgrass, the artist who pioneered new techniques and a host of modern glassblowing tools. Now the man who launched the modern pipe movement speaks about his legacy. *By Jason Harris*

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HIGH TIMES

DIGITAL



Glass Artist of the Month

Based in the mountains of Vermont, Matt McLamb is a "studio rat," working countless hours in his home studio. He's a self-taught artist who's been behind the torch since 2001.

Matt's an innovator, constantly bringing new ideas to the table and experimenting with new techniques. He developed the technique of image transfer to glass in 2008, taking it from the soft glass industry and introducing it to the borosilicate world. His perfection of the technique has garnered lots of oohs and ahs, and his pieces are highly coveted.

Matt is also known for his kinetic glasswork, combining his two favorite interests—science and function. He's known for making the first spinning pipe and many other kinetic creations. He placed second in the Pipe Classic VI with his 4-foot flying bird water pipe.

Like most American glass artists, his community has inspired him: "They push their personal limits and I try to push mine."

POT POLL

The State of Your Stash

For most Americans, buying pot isn't like buying a quart of milk. Sometimes it's great, sometimes it's so-so and sometimes who knows? We asked a burning question: How's your stash right now? A third of the 2,200-plus respondents say they're smoking great weed. But a lot of you are dry. Sadly, nine said they're not sure what they're smoking. Our advice: don't!

Cast your vote in our latest poll online!



Calling All Stoner Girls!

In response to your feedback, we've completely redesigned our Miss High Times website from the ground up—making it simpler, cleaner and easier to navigate, as well as adding new galleries and videos. We plan to add many more features in coming months, but for now we encourage everyone to log on to the beta site, create a profile and start posting!

[Go to misshightimes.com.](http://misshightimes.com)

You Can Have It All!

We're thrilled to announce that the complete archive of *High Times* (that means every issue!) will be available online in October. Watch hightimes.com for the archive countdown!



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Cannabusiness 101

What a difference a few years make, eh? In the old days (not that long ago), when *High Times* was teaching people how to make a buck in the marijuana industry, it was by participating in an activity that, in their ignorance, the powers-that-be had declared illegal. (If you are like me, and happen to live in one of the less-enlightened states in the nation, it's still illegal—but we're working on that). But now, the legal cannabis industry has grown at such an accelerated rate that there are literally thousands of employment opportunities open in dozens of categories, all of them aboveground, sanctioned



Legal cannabis at work.

by state governments, and begrudgingly tolerated by the feds. We're talking about careers—professional positions that pay city, state and federal taxes, and in many cases include benefits. We're living in a new world, and *High Times* considers it our responsibility to help cannabis lovers out there get a foot in the door of this rapidly expanding legal cannabis market. That is the point of Jen Bernstein's article, "The Booming Business of Buds" on page 47.

Don't worry, we're still going to tell you how to grow marijuana while simultaneously avoiding the long and toxic arm of the law, and to that end, Nico Escondido's "All Systems Grow" on page 64 provides us with a breakdown of hydroponic systems where you can grow legal or illegal bud, depending on your circumstances. (In either case, we suggest you don't tell your neighbors about it.) For the dab fans out there, we also present "Clones to Concentrates" by Dan Skye on page 56.

And while we're talking about toxic law enforcement, we have two articles this month that detail the unsavory practices of cops and their bizarre relationships to the canine world, Russ Bellville's "Cops and Canicide" on page 21 and my own "Fury in Missouri" on page 91.

Finally, we pay tribute in this issue to a pioneer of psychedelic research. Alexander "Sasha" Shulgin, from a small cottage in Northern California, singlehandedly transformed the way we trip. James Kent, a psychedelic researcher in his own right, might have been the last journalist to visit him before he passed. Check out his touching memorial, "The Last Alchemist," on page 82.

Peace,

Chris Simunek
Editor-In-Chief

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The Negatives of Testing Positive

I'm a board-certified physician's assistant (a.k.a. midlevel provider) who was recently terminated by a large medical group in New Mexico, despite having a medical cannabis card! I have filed a lawsuit for illegal termination and have done a couple of interviews, most recently with KOB Channel 4 here in Albuquerque, NM.

In a nutshell, I'm a disabled vet. I served in the US Air Force for six years and use cannabis for my PTSD. I am enrolled in the New Mexico medical cannabis program, but the Presbyterian Medical Group has terminated me for "failing a drug screen." The only substance found in my blood was THC—but despite providing them with a copy of my medical cannabis card and ID, I was still terminated. I am not only a medical provider but a patient as well. So I'm suing the Presbyterian Medical Group for illegal/discriminatory termination, and I was wondering if your readers and my fellow medical cannabis users would support me in this fight!

Thanks for all the good work!

D. Smith

Where's the Real Kind Bud?

The market's bottom line is always primarily driven by volume and margins, not quality. Invariably, there's never enough high-end bud available relative to demand anyway—and a largely unknown but well-established micro-market of high-end connoisseurs tends to grab the lion's share of anything really good at a higher price before it disappears into a now more accepting and growing public marketplace.

I've seen it far too much in the Pacific Northwest: dispensaries that purportedly have something "top shelf," though the quality, more often than not, falls into the category of upper-level commercial (at best) in my pot veteran's catalog. It's often dry and crumbly, and many times the strains look like they came from the same source or seem too similar to one another. As Laurence Cherniak pointed out in his *Great Books of Hashish*, popularity and high business volume always affect quality negatively. As with most dealers, dispensary owners don't really want the super bud on their shelves: They make far more off the margins from upper-level mids passed on to unsuspecting and naive newbs as top-shelf dank ... you dig?

SR

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High Times October 2014



Marijuana has been a medicine to help us vets maintain our sanity with the normal world we once protected.

Vets Need Cannabis Now!

My name is Crystal Hall. I am an army veteran. I joined the army at the age of 19 after high school. My first duty station was South Korea. Alone away from home I got raped by two military personnel. I continued to my service and deployed two years to Iraq. I was a single mother of a six-month-old and had to leave home to fight for her freedom. I have MST (military sexual trauma), PTSD, severe anxiety and depression. I served my country proudly but I'm writing about the vets and marijuana as their medicine. I have been nothing but a guinea pig for pills. I found that a nice joint would do just the same. People really don't realize when we served we gave our freedom and our well-being up for them to enjoy life and go on living life the way they know. People don't look at us the way we deserve to be looked at or treated. Since I completed my time and treat myself with pot, I have been criticized. The state takes my kids, people say I'm nothing but a lowlife, and I'm treated like garbage because I smoke marijuana. I don't understand how or why the government, or people that have never served, can judge us. I've seen things a normal person has not seen. It is instilled in our heads, all the violence and hatred

we veterans have seen. When we come home how can we deal with that on a daily basis? Myself and many vets have turned to marijuana to help ease the painful memories that we endure. Please help us. We went and died to protect everybody at home. Marijuana has been a medicine to help us vets maintain our sanity with the normal world we once protected. Don't forget about us. Help us legalize marijuana for vets.

Crystal

Forced to be an Outlaw

I am a disabled veteran. I suffer from schizoaffective disorder bipolar type. And I have arthritis. Among my many symptoms are anxiety, depression, muscular joint pain and inflammation. Sometimes I am beset by thoughts of suicide, anger at my condition, and a sense of hopelessness.

Even with my regular brain meds, there are times when my symptoms overwhelm me. At those times cannabis is the medicine that brings me back to a place of safety and comfort. The medicine is strain-specific, so to ensure a supply of the correct strain, I grow my own. However, under New Hampshire's law I don't qualify for medical cannabis. And even if I did, I wouldn't be allowed to grow my own. So, because I choose to reduce my suffering and discomfort as much as possible, I am an outlaw, risking jail for peace of mind.

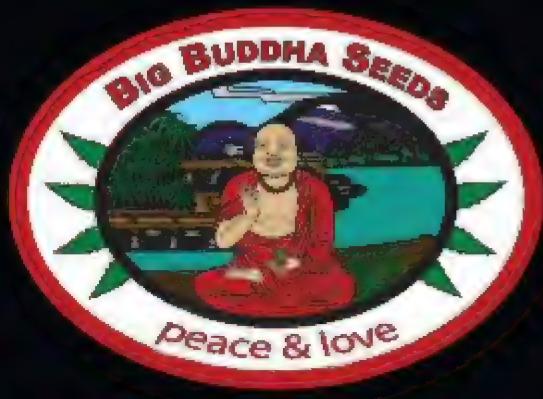
On a lighter note: Did I miss something? It's been a while since I last read *High Times*, and now I'm seeing a new kind of concentrate or extract—or just what the heck is "wax"? I finally got the honey oil thing all figured out, and you spring this "wax" on me. What is it and where does it come from? Is there a back issue that covers this? I have to ask, not because I'm stupid, just old and in the way!

Uncle Lee, NH

Bobby Black responds: Wax is just a specific type of butane honey/hash oil with a soft, "waxy" consistency. For more in-depth info on concentrate terminology, go to hightimes.com/read/official-dab-dictionary.

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ALL SYSTEMS GROW Pot plants exhibit explosive growth rates when hydroponic systems are fully dialed in and heavy branches need trellising for support. Learn all about the many different styles of indoor hydro in Nico Escondido's article on page 64. Bonus: Nico's Cultivation Clinic on page 109 details efficient ways to use trellises to harvest more buds. Photo by Lochfoot





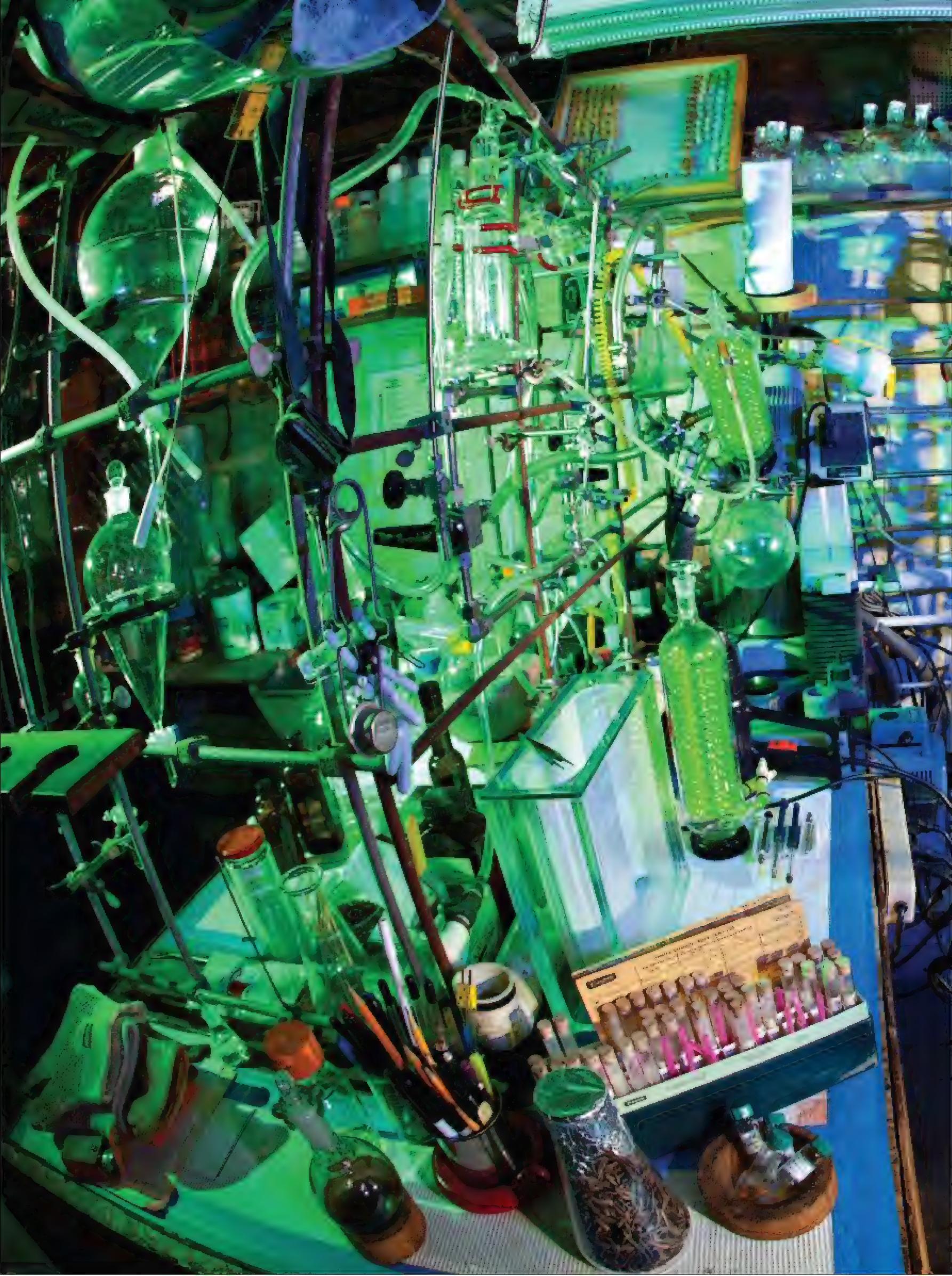


October 2014 High Times

GET A JOB Marijuana lovers can now legally work in their field! One of the top jobs in the industry is the ever-important trimmer. It's a meticulous, demanding gig, but the payoff is high; these industrious trimmers are clearly enjoying their work. For an in-depth look at careers in cannabis, check out Jen Bernstein's "Booming Business of Buds" on page 47. Photo by Dan Skye

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Contact
High





October 2014 High Times

THE ALCHEMIST'S HIDEAWAY In this lab, over the span of decades, Alexander Shulgin, "Sasha" to his friends, synthesized hundreds of psychedelic compounds. He also did groundbreaking work isolating terpenes and cannabinoids in cannabis. James Kent visited his headquarters in late May. A week later, on June 2, 2014, Shulgin passed on to the other side—his final trip. Photo by Lochfoot

19

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OFTEN IMITATED INVITED NEVER DUPLICATED

They say that that imitation is the ultimate form of flattery ... really???

The fact is, every new nutrient manufacturer (and even the old guard) want to compare themselves to our products. It would appear we are the hydroponics nutrients measuring stick.

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... The same formulations we perfected using some of the world's most sophisticated plant tissue testing equipment like our quadrupole gas chromatograph in our state-of-the-art Bulgarian laboratory that measures to the parts per trillion ...

... Come on ... Really?

Look, you're smarter than that. We all know the imitation colas you buy from discount stores are "reverse engineered" to copy Coca-Cola® too. But is it exactly the same? Absolutely not!

Everyone knows, at the end of the day, there is only one "real thing".

Bottom line is ... can you or do you really want to risk your valuable cannabis crops and your hard-earned money on unproven claims sold on the basis of "cheap"?

Sincerely,



Michael "Big Mike" Straumietis

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Highwitness News

Light Up & Laugh with the Lucas Brothers!



Cops killing pets is another Drug War atrocity.



Cops and Canicide

The police are routinely murdering dogs in their marijuana raids. Where's the outcry? *By Russ Belville*

Canicide by cop is the phenomenon in which law-enforcement officers shoot and kill pet dogs in the performance of their duties. People may imagine the scenario of a late-night, no-knock raid in which a cop has to shoot a snarling pit bull charging to attack him—even though the cop is wearing bulletproof armor and there's never been a documented instance of a family dog killing a police officer. However, the reality is that cops are killing pets as a matter of routine procedure—and sometimes as a method for achieving the “shock and awe” intimidation of drug-raid victims.

Canicide by cop doesn't just take down pit bulls, Rottweilers and German shepherds; it also kills corgis, dachshunds and even Chihuahuas. And the death toll extends beyond man's best friend: In one Ohio incident, a “humane officer” responding to a call about a litter of feral kittens living in a woodpile shot them all to death in full view of a group of screaming children, while in a Staten Island bust—over a misplaced traffic cone, believe it or not—the cops even stomped a parakeet to death.

Where is People for the Ethical Treatment of Animals (PETA) on this

Entertainment

High Wattage

Down the memory hole with Mike Watts. p.32



Food

Avocado Dragon Cake

Sticky green dragon sugar offers a super stone. p.38



issue? Why haven't they heard this news from the American Society for the Prevention of Cruelty to Animals (ASPCA)? Shouldn't the Humane Society of the United States (HSUS) be addressing the media about this epidemic of animal killings by police?

That's right—*epidemic*. There are so many instances of canicide by cop that “Dogs Shot by Police,” a Facebook page founded in 2012, has over 10,000 “likes.” The site contains hundreds of local news stories about devastated families whose beloved pets were pointlessly executed by the police.

In one case in Louisiana this past

April, two young men were traveling from Maine by hopping freight trains. Accompanying them was a 14-month-old Newfoundland-Labrador golden retriever mix named Arzy. To escape the rain, the two men and the dog sought shelter in the back of an empty truck in a parking lot. Police arrived with guns drawn to investigate. The two men were polite and compliant and even tied Arzy's leash to a fence when ordered to do so by police. One of the cops cuffed the men and turned them away from the dog. According to an eyewitness working nearby, the cop bent down and petted the friendly Arzy. Then he backed up and shot the dog in the back of the head. According to the two men, the cop smiled at them and claimed Arzy bit him in the foot—something the eyewitness says never happened.

Cases like Arzy's are not as common as the ones in which police serve a warrant in a marijuana investigation and then kill the dogs to teach "potheads" a cruel lesson. In Detroit, cops making a marijuana bust shot a man's pit bull, which was safely confined behind a locked fence. Then they entered the home to chase down and shoot two other dogs in the back, even as the owner begged the police to be allowed to put the dogs out of harm's way.

In another pot-raid-turned-dog massacre, a Columbia, MO, police officer was heard explaining: "When you deal dope and the police have to come to your house, that's what happens."

But what about nonlethal options, like tasers and pepper spray? According to New Jersey State Patrol Capt. Stephen Jones, who was responding to an incident in which the state police shot and killed a woman's dog in an alley, tasers are "generally not too effective on a charging animal. Pepper spray is clearly not effective on most dogs."

Hmmm ... then why do postal workers, deliverymen and meter readers carry pepper spray?

I reached out to PETA for a response, but never heard back. I even wrote

The cops are trained to "neutralize the threat" of a dog during a search or arrest, and department protocols always back them up if they claim they felt threatened by the dog.

directly to one of their most prominent board members, animal lover and pot-smoking comedian Bill Maher, hoping he'd help focus attention on some of the most common legalized animal cruelty happening in America. I never heard back from him, either. Maybe if somebody were skinning dogs for fur coats, à la Cruella de Ville in *101 Dalmatians*, there'd be a reaction from PETA.

To their credit, the HSUS and ASPCA have at least tried to address the epidemic. According to an article on the *Huffington Post*, "Groups like the Humane Society and the American Society for the Prevention of Cruelty to Animals offer free training to police departments, but both organizations said few departments take them up on the offer."

It's a shame they don't, because it's the same kind of training that postal workers receive regularly on

understanding canine body language, establishing dominance and dealing with the few aggressive dogs out there.

Meanwhile, the cops in these stories are rarely disciplined and almost always keep their jobs. What happens is this: The police department conducts an internal investigation and routinely finds that the officer acted "according to procedure." The cops are trained to "neutralize the threat" of a dog during a search or arrest, and department protocols always back them up if they claim they felt threatened by the dog.

Psychologists often say that cruelty to animals is the first sign of a developing sociopath. So perhaps we shouldn't allow such cruelty to be a part of any police department's standard operating procedure. 🌿

Listen to The Russ Belville Show at radicalruss.com.

HIGH FIVE

Marijuana Metropolises

Stoners abound in our nation's most populous regions. *By Mark Miller*



Colorado Front Range
Amsterdam is no longer the planet's marijuana mecca. Denver is! A recent *Movoto Blog* review calculated that there's one Mile High dispensary for every 3,780 residents—to say nothing of the recreational pot shops that have opened since then. Neighboring Colorado Springs and Aurora are also high on the list in terms of dispensaries per capita and headshops. And don't forget Boulder. It's been pot-friendly since long before it was legal!



San Francisco Bay Area
Home to arguably the world's best weed, this region is where the medical marijuana revolution started in the 1980s, leading to Prop. 215's landmark approval in 1996. San Fran voters also passed Proposition W, designating pot as the lowest law-enforcement priority, way back in 1978. Across the bay, Oakland makes the top 10 for dispensaries per capita. Nearby San Jose ranks fifth for medical pot shops.



Seattle Metro Area
The Seattle Hempfest is a three-day pot rally unlike any other. Though Washington State lags behind Colorado in establishing retail recreational weed, Seattle still boasts the fourth-most dispensaries per capita in the nation. Even before Initiative 502 passed in 2012, Seattle Mayor Mike McGinn supported legalization, and in 2010 City Attorney Pete Holmes announced simple possession would no longer be prosecuted.



Greater Los Angeles Area/the Southland
Due to its massive population, LA ranks ninth in dispensaries per capita, but it still has the most in the nation—at least 450—despite a voter measure intended to limit their number to 135. The City of Angels also has the most medical marijuana patients (over 56,000 and climbing). Meanwhile, San Bernardino has the most headshops per capita among the 100 most populous cities in the US.



Greater Boston
Massachusetts may be the East Coast's answer to Colorado and California in terms of quality. Since 2009, personal possession in the state carries only a \$100 fine and no criminal record. The first medical marijuana dispensaries are set to open in Beantown this summer. With nearly 30 colleges, the pot scene is thriving. Plus the annual Boston Freedom Rally is the second-largest cannabis convocation in the nation.

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Teens & Pot—Not!

Let's kill another myth: Legal pot doesn't lead to increased teen use. Despite medical marijuana's legality in nearly half of the US, pot use among high-school students is essentially unchanged, according to the latest Youth Risk Behavior Survey issued by the Centers for Disease Control. The students fill out the research questionnaires anonymously, self-reporting their own pot and other drug use.

Last year, 23.4 percent of teens reported getting high one or more times a month, compared to 23.1 percent in 2011. What's more, pot use is down by more than 3 percent from its peak in 1999, when 26.7 percent of the teens participating in the survey said they toked. Alcohol and tobacco use are also in decline, suggesting that pot legalization might actually reduce teen usage by eliminating the youth appeal of the "taboo factor."

No data are available yet for Colorado and Washington in 2013, the year both states legalized recreational pot. However, from 2009 to 2011, years in which medical marijuana was already legal in Colorado, teen cannabis consumption in the Rocky Mountain State decreased almost 3 percentage points, from 24.8 to 22 percent.



Flyin' High

Legal cannabis can't take all the credit, but Denver International Airport had a record number of passengers in April—over 4 million, up 130,275 from the same time last year.

April, of course, is the month of 4/20. Along with the High Times Cannabis Cup in Denver and a citywide celebration culminating in a downtown rally that drew thousands of people, it's only natural that pot tourism would contribute to the spike in Colorado travel—especially since legal retail pot shops have been open since January.

The total number of passengers to Denver International Airport is up 2.1 percent from last year. Furthermore, international travel has risen 24 percent.

Harvesting Happiness

It's been said that a surgeon's duty is to tranquillize the temper, beget cheerfulness and impart confidence of recovery. Certainly, the same can be said for pot growers at harvest-time. Their crops will tranquillize the temper, beget cheerfulness, and impart confidence of recovery—no matter what the ailment!

Butts & Buds

Remember the urban legend that Big Tobacco had plans in place to sell packs of joints like cigarettes? Guess what? That was no myth!

Newly uncovered archives at the University of California in San Francisco reveal that in the '60s and '70s, tobacco corporations did explore marketing weed. Published in the health-policy journal *Milbank Quarterly*, the documents include a 1969 letter from a Philip Morris VP asking the Federal Bureau of Narcotics (the forerunner of the DEA) for a clandestine sample of pot for the company to study. The FBN's drug sciences chief, Milton Joffee, replied that Philip Morris—the maker of Marlboro, Merit and other famous brands—could bypass a standard application review by the Food and Drug Administration for obtaining the ganja. (No



documents exist to indicate that the research actually took place.)

Additionally, an unsigned note explained Philip Morris's interest in packaging pot: "We're in the business of relaxing people who are tense and providing a pickup for people who are tired or depressed. The only real threat to our business is that society will find other means of satisfying those needs."

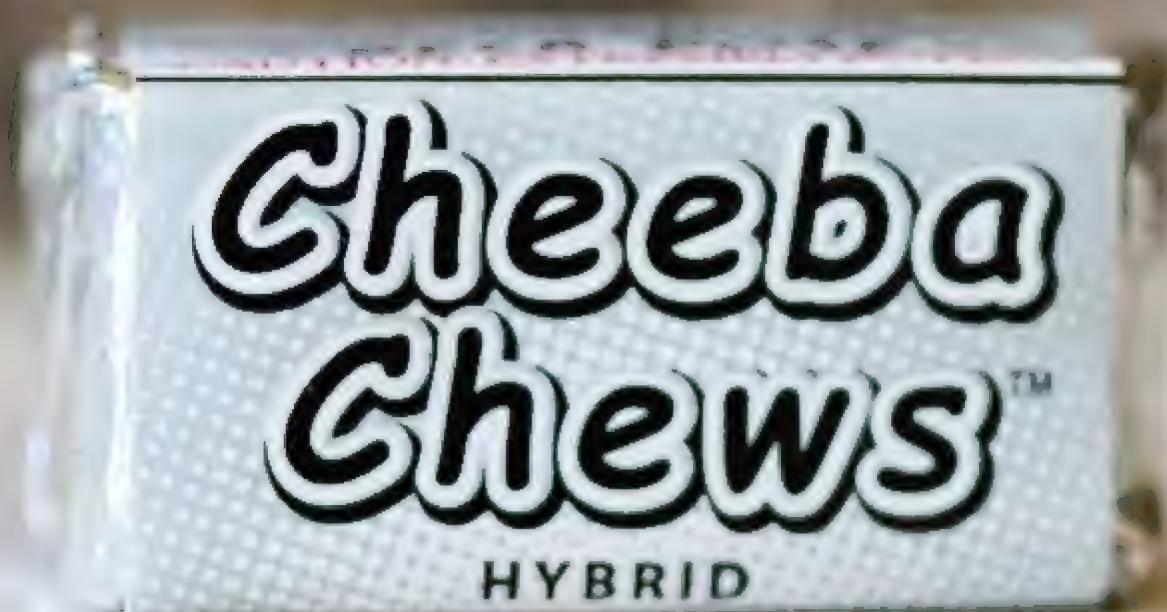
In 1970, British American Tobacco (Kent, Kool, Lucky Strike) conducted covert research in the UK, dubbed the "Pot Project." Chief science advisor Charles Ellis proposed a plan for BAT to sell "cannabis-loaded cigarettes" in the form of tobacco cigs supplemented with "dried and cut cannabis rag" (i.e., ground-up pot).

In 1992, executives with R.J. Reynolds (Camel, Salem, Pall Mall)—motivated by false rumors that a French company was producing butts with buds—advocated analyzing pot "in view of the possibility of its future more frequent use in certain European countries."

Today, however, all of these tobacco companies deny any interest in marketing marijuana. That's one myth we won't buy.

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Propaganda Parade

Pot is addictive and harms its users' health. How do we know that? Because Dr. Nora Volkow, director of the National Institute on Drug Abuse, says so. In June, she was cited as the lead author of "Adverse Health Effects of Marijuana Use," published in the *New England Journal of Medicine*. The NIDA report maintains that pot is indeed addictive and that 9 percent of its users become hooked.

We're hardly surprised by NIDA's anti-pot bias; it's a federally funded research institute that echoes the US government's longstanding prohibitionist policies. But seriously now ... addiction?

The NIDA report also cites the problems associated with tobacco and booze as examples of why pot should remain criminalized, proclaiming: "We don't need a third legal drug."

Third? Legal prescription drugs don't qualify? They often cause serious side effects—including the possibility of fatal overdose, something that can never happen with pot.

Finally, Volkow reinforces her total lack of credibility when she calls pot a "gateway drug." As far back as 1999, the Institute of Medicine of the National Academy of Sciences wrote: "There is no conclusive evidence that the drug effects of marijuana are causally linked to the subsequent abuse of other illicit drugs."

Jamaica Wrestles with Legal Ganja

This fall, Jamaica's parliament is expected to vote on a proposal to allow possession of up to two ounces. Small amounts would still be "ticketable" offenses, but medical or religious use would be decriminalized. Confusing? Absolutely. A *Jamaican Observer* editorial questioned the logic of the new law: "How does fining people square with the government's proposal to allow the use of the herb for religious purposes?"



Reefer Racism

Despite an election-year pledge by New York City Mayor Bill de Blasio, the Big Apple's racist war on marijuana users continues undisturbed. After a decline in the number of petty pot arrests in the harsh winter months of January and February 2014, low-level weed busts increased in March and April compared to the same months in 2013—mostly in low-income minority neighborhoods.

According to the latest report from the Marijuana Arrest Research Project, during the first four months of 2014, the NYPD made an average of 80 minor pot arrests per day, which puts the city on pace to equal the 28,000-plus people popped for petty possession in 2013 under former Mayor

Michael Bloomberg.

Breaking down the busts demographically further reveals the racial and class bias. Through April, poor minority neighborhoods were hammered: East New York had a total of 500 pot arrests, and Morris Heights in the Bronx saw 392. But the high-income neighborhoods on the Upper East Side and Upper West Side of Manhattan recorded only eight each.

Overall, 87 percent of those busted for weed across the city's five boroughs were either African-American or Latino. Sadly, 73 percent of the arrestees had no prior convictions, thereby permanently staining their records.

The Big Apple won't be surrendering the title of "cannabis arrest capital of the world" anytime soon.

Late White North

When the Canadian government ran the country's medical marijuana program, Health Canada's performance was abysmal—inferior cannabis products, backlogged patient applications and badly written cultivation laws. The agency completely revamped the program as of April 1, barring patients and caregivers from cultivation and allowing licensed cannabis companies to handle the action.

Unfortunately, the bureaucracy hasn't improved. Thus far, Health

Canada has approved only 13 licensed suppliers. The agency attributes the delay to the overwhelming number of applications (858 as of late May) and an extensive vetting process.

Supplier license applications continue to pour in at an average of 25 per week, putting Health Canada further behind the eight-ball. To ease the pain, a March injunction by a British Columbia judge allows previously registered patients and caregivers to continue ganja gardening until the agency gets its act together.

Relocation & Medication

"I'm trying to help Greg die with dignity and peace." That's the reason given by Deb Ploetz, 63, for moving from Texas to Colorado so that her husband can use medical cannabis to treat his serious mental illness.

Greg Ploetz played defensive tackle for the University of Texas Longhorns. An artist and art teacher, he now suffers from "mixed dementia" and frontal brain-lobe damage.

Greg's behavioral changes resulted in hostility toward treatment, including the medical professionals who assisted him and administered his five prescription drugs. After he was booted from his third Texas care-giving center, Deb couldn't bring herself to commit him to a state psychiatric hospital.

But she did recall giving Greg a joint earlier in the year, which visibly calmed him. She decided to relocate to Colorado, where cannabis is legal.

Every morning, Deb visits Greg in his assisted-living facility and feeds him a cookie containing a small drop of *indica* oil; each night she gives him a capsule of *indica* extract. These treatments calm Greg within 40 minutes and have enabled him to kick most of his prescription medications. He now allows the staff to shower him, and he's also able to finish his sentences.

"I'm not trying to get Greg high," Deb says. "I'm trying to give him peace of mind."

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HIGHWIRE

Dispatches from the international drug war. By Bill Weinberg



Ex-Vigilantes Register Weapons in Michoacán

On May 10, the Mexican government began to swear in members of Michoacán state's "community police" vigilante network as a new rural police force, part of an effort to bring the self-defense militias under state control. An initial 240 "community police" members gathered for the ceremony in the village of Tepacaltepec, a stronghold of the movement, where they received new blue uniforms and registered their rifles (or turned them in for state-issued AR-15s). The ceremony was overseen by the federal point man for Michoacán, Alfredo Castillo, who waxed florid for the occasion: "Those who, 15 months ago, said 'Enough!' and decided to confront those who did them harm—because of them, today we have the Rural Defense Force, which carries the same conviction of justice, of courage, valor and bravery needed to protect those whom we love the most: our families."

A former "community police" leader, Estanislao Beltrán, a.k.a. Papá Pitufo (Papa Smurf), was named as head of the Rural Defense Force. But José Manuel Mireles, the most visible leader of the movement, was not in attendance at the



Peruvian Pot Activists Target Right-Wing Paper

Members of the group Legaliza Perú staged a sit-in at the doors of Lima's conservative daily newspaper *El Comercio* on May 16 to protest an opinion piece by columnist Martha Meier that ran a week earlier. Meier's column carried the sneering headline *Y ahora ... el lobby de los pastrulos* ("And now ... the *pastrulo* lobby"). *Pastrulo* is Peruvian slang for someone who smokes cocaine paste—even though Meier was writing about the successful cannabis legalization march held in Peru's capital on May 3 (which makes this sort of like calling cannabis smokers "crack-heads"). The column was full of the usual ridiculous claims that cannabis is "very addictive" and "affects mental health" (recycled from the world media's Drug War scare machine and duly accepted without question). Legaliza Perú's press release called Meier's column "inexact and prejudicial," which is being very polite.

The May 3 Global Marijuana March—known locally as the Manifestación Mundial de la Marihuana, or MMM—brought several hundred people to Lima's downtown Plaza Francia. The event has been growing in numbers every year since it was launched in 2010, which means that Peru's prohibitionist establishment has every reason to be worried.

ceremony—pointing to the likelihood that some vigilantes are refusing to register, even at risk of arrest or confrontation with the new "official" security forces.

Narco War on the Texas Border

Mexico's government has pledged to deploy more security forces to the state of Tamaulipas, where a little-reported full-scale war is being waged between rival narco gangs right on the Texas border.

Mexican Interior Minister Miguel Angel Osorio promised a "new phase" in the federal government's efforts after the May 5 assassination of Salvador Haro Muñoz, the Tamaulipas state



intelligence chief, in an ambush on his car in the state capital, Ciudad Victoria. Ten officers from the Tamaulipas state police have been arrested by federal authorities in connection with the hit, which was said to have been carried out by the Zetas narco-paramilitary network. Also detained was José Manuel López Guijón, the security chief for Tamaulipas Governor Egidio Torre Cantú. "We will strengthen

surveillance at ports, airports, customs and border crossings, as well as the major land routes," Osorio told a press conference in the border town of Reynosa. He said security forces will "patrol 24 hours, every day of the week, in main urban areas," and conduct reviews of local police forces to fight corruption. There's an ominous sense of *deja vu* to these developments, as the Mexican government has pledged many times before to get Tamaulipas under control with big troop deployments—only to escalate the level of violence each time.

Knights Templar Mineral Exports Seized
Mexican authorities on



May 1 announced the seizure of a ship carrying 68,000 tons of illegal iron ore bound for China, hailing it as the latest blow in a crackdown on the contraband-mineral sideline of the Knights Templar drug cartel. Federal police were apparently tipped off by an anonymous phone call after the ship left Lazaro Cárdenas, the Pacific port in conflicted Michoacán state. Authorities detained the ship, the *Jian Hua*, off Manzanillo, the next major port up the coast, in neighboring Colima state. Mexican authorities say they've seized over 200,000 tons of illegal iron ore so far this year, most of it headed for China.

Two days before the seizure was announced, Arquímedes Oseguera Solorio, the mayor of Lazaro Cárdenas, was arrested along with the city treasurer and other officials by Mexican federal police on suspicion of ties to the Knights Templar. Lazaro Cárdenas has emerged as the main export hub for the cartel, which is believed to be one of the main suppliers of methamphetamine to the United States. 🍀

For updates on these and other stories, see Bill Weinberg's websites, GlobalGanjaReport.com and WorldWar4Report.com.



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Immerse Yourself

Adventuresome stoners will love the latest performance trend popping up all over the US: Immersive theater. The movement was pioneered by the wildly popular *Sleep No More*, set in a NYC warehouse transformed into an “abandoned” hotel. Audience members follow performers up stairs, down corridors and into gorgeously appointed rooms. It requires good balance and depth perception to keep up with the action, so being just a teensy bit toasted is ideal. Ditto for *Queen of the Night*, an over-the-top feast for the senses in an ancient ballroom under Times Square. The roast pig on a spit and boiled lobsters served to attendees as the performers cavort above and around them would be perfectly complemented by a puff before the show.

This summer in Denver, Champa Street was transformed into an immersive arcade with body-controlled video games—made all the more enjoyable by legal pot. And this October, Seattle Immersive Theater presents *Supraliminal*, a site-specific show with a parapsychology lecture and a field investigation of “psychic phenomena.” Lucky Seattleites can take full advantage of legal marijuana to heighten their theatrical experience!



Keith and Kenny Lucas do everything alike.

Twin Hitters: The Lucas Brothers

For those of us who weren't born with a body double, the obvious question for the comedy team of Kenny and Keith Lucas is: "What's it like?"

Keith responds first (we think): "We go through identity crises all the time," he says. "It's an existential breakdown. You have another you. It just trips me out sometimes."

Kenny adds, "You sit in judgment all the time."

Whatever the twin dynamic is really like, the red-hot Lucas Brothers have put it to good use creating absurdist, off-the-wall comedy. They're about to go on tour, while their new series *Friends of the People* has just debuted on TruTV. It's a cavalcade of scripted sketches and person-on-the-street segments. And *Lucas Bros. Moving Co.* is still chugging along, the animated series featuring the twins as cartoon characters who have inherited a moving van from their dead uncle. Plus the brothers passed their big-screen Hollywood test this summer, co-starring

as Channing Tatum and Jonah Hill's dorm mates in *22 Jump Street* and scoring some big laughs.

Asked whether their comedy has stoner appeal, Kenny responds, "I don't know what that means, man. I know most twin acts are kind of high-energy, but that's not us."

"We're chill," Keith adds. "We do what seems funny and go into some weird corners. Maybe stoners appreciate our comedy more because pot inspires it." (For example, their inspired take on what it's like to 'shroom with someone who looks just like you.)

Or, as Kenny proclaims, "Individuality is overrated!" To amplify the point, Keith chimes in: "God bless the Olsen twins! We want that kind of money. They're showin' us how it's done!" *Dan Skye*

For tour date info and Friends of the People airtimes, visit thelucasbrothers.tumblr.com.

SPOTLIGHT

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"If I don't write it out, it's gone down the memory hole. But that's why I like pot—it lets me let go of memory and relax."

What do you think of pot legalization?

Finally, it's happening. I was born in 1957 and grew up during the period where they blamed pot for *everything*. Like *Reefer Madness* in the 1930s—but they were doing that in the '60s and '70s, too.

Do you still miss D. Boon?

Without D. Boon, I wouldn't have gotten into music. I celebrate his birthday [April 1], not the day he got killed. I dedicate a lot of my music to him.

Do you still practice bass technique?

Yeah, but I like to connect it to tunes—everything I do on bass is the foundation of serving the tune. The more notes you play, the smaller you get, so it's about finding the right notes. The future of bass is composing, when you leave a lot of space for the other musicians on guitar and keys.

What defines punk music?

It's not about a style of music, but a state of mind where you don't feel you fit in, so you create a parallel world that makes more sense. *

*Thanks to bassist B. ILL of Sterile Jets for arranging the interview.

High Wattage

When it comes to weed, Mike Watt knows when to hold 'em and when to fold 'em. *By Mark Miller*

Mike Watt's majestic performances on bass and in the genre-defying music he produces are as fluid and flexible as his integrity is unyielding. Go ahead, just try and catch him doing anything "mersh" (Watt-speak for going commercial or selling out). He was a co-founder of the seminal 1980s group Minutemen, and after the tragic van-crash death of guitarist/singer D. Boon in 1985, Watt redefined himself with a dizzying array of creative projects, both solo and in bands. From his Southern Cali home in San Pedro, Watt spoke with *High Times* about everything from pot to what truly defines punk rock.*

You played on the Stooges' 2013 album Ready to Die. What's it like being a Stooge?

I was very honored to get to play on that. Without them, we wouldn't have punk. I've now played [live] with the Stooges for 125 months. I would've never imagined it as a young man—they were such a big band for me.

Do you use pot?

I've smoked it since I was a boy. I use it before I go to sleep because it gets me calm and helps with my joints [laughs]. But if I try to use it while playing, I can't remember anything ... can't remember the chords or the lick I just did. And with alcohol, I can't hear pitch

right. I play better straight. At an early Minutemen show, I played on L [LSD] because I didn't know we had a gig, and I couldn't hit the right chords. I'd have to practice playing buzzed [laughs again].

What about creating music while high?

Maybe some initial ideas, but I just can't remember what I did. If I don't write it out, it's gone down the memory hole. But that's why I like pot—it lets me let go of memory and relax.



Blazing On

Interviewed right before his 56th birthday, Watt said he'd play in two different bands that night. "Birthdays are like a lighthouse," he says, "telling me how much work I still got to get done." Thirty-five years after his first record, Mike Watt is still going strong.

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"A toke here and there helps Oozing Wound keep the creative juices flowing."

Inevitable destruction of our poor doomed planet Earth, the band purposely mix the vocals way down so that all lyrical nuance gets pretty damn lost.

"The best lyrics are the ones that you can't understand, and that you find out are actually kind of interesting," Weil explains.

"It's that David Byrne thing where the vocals make you listen to a song longer than you would if they weren't there," Cribbin adds.

The post-post-nu-metallica "Call Your Guy" or the swaggering, squawking aggression of "Spirit Manimal" contain what must surely be Riffs of the Year, among a major stack of other thrashing guitar lines that, upon close listening, send one into a trance state. This ultimate rifferini is near-scientifically worked out in order to, as Weil puts it, get "the most mileage out of the riff."

"You gotta sit on it a while," Cribbin says, "focus on it till it doesn't even make sense anymore."

A wee toke here and there helps Oozing Wound keep the creative juices flowing like a bubbling stream unto infinity. "It's good for writing," Cribbin avers. "It facilitates the experience."

"When I write a lot of the riffs," Weil says, "I'm aiming for creating this artificial zone, and pot is a really good aid in creating that kind of feeling." *

Peel Your Face

Chicago noise-metallers Oozing Wound will leave you groping for your countenance ... and perhaps a bong. *By John Payne*

If it's extreme metal we're talking about, who needs melody, harmony or even "songs" when you can have a lotta heavy riffing and hatred and shouting? Take it from Oozing Wound, this is all that's required. Their motto? "Get High, Fuck, Destroy." It's an attitude that bleeds all over their recent album *Retrash* (Thrill Jockey), a headbanging-to-the-50th-power experience that reduces the very concept of thrash metal down to its cathartic core.

There's a zenlike purity to Oozing Wound's approach: "We try not to think about it," says guitarist Zack Weil. Then he laughs. So do his bandmates, Kevin Cribbin (bass) and Kyle Reynolds (drums). They snigger a lot, which might be because their whole trip is kinda funny,

when you think about it. The trio emerged from the wicked Chicago underground scene that spawned the ugly glories of noise/thrash/noise bands like Cacaw, Unmanned Ship, ZATH and Bad Drugs. For Oozing Wound, however, their chosen MO is a method that employs no method at all.

"We all listen to other kinds of music," says Weil, "but the most fun stuff is the kind where you get to just *freak out* and see people freaking out. To those people, our stuff sounds like thrash or crossover or whatever, but there's no real plan."

"Not a conscious one," Cribbin says. "But we agree with everything we've done."

While song titles like "Everyone I Hate Should Be Killed" and "Autopsy Turvy" clue you in that Oozing

Wound are not some grim-faced dealers of Norwegian death metal, the songs' insanely adrenalized rush makes it clear that these guys are *fast*. Indeed, they seem to draw on some kind of mystical inner mounting flame, or perhaps just huge loads of speed.

"No, we're just working stiffs," Cribbin says. "I'm not into 'fast wars'—there's always some faster cat on the block. But Zack is fast, Kyle's a madman, so I gotta play fast too!"

Though the tracks on *Retrash* seem to address weighty issues like anger, paranoia and the



Vaped and Pillaged

Though Oozing Wound's first cassette was titled *Vape and Pillage*, Weil prefers edibles and isn't a huge fan of vaporizers: "They take part of the high away, and it's not the same kind of fun. They make me clench my jaw a lot."



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Howling Hooks

The Queen City spawns a killer band.

Heavy reverie, indeed: This new album by the psychonautic Buffalo Killers is hard-hitting yet dreamy, filled with weighty guitar riffs matched by free-floating lyrics that loosely explore the headspace of brothers Zachary and Andrew Gabbard, the band's lead songwriters.

Heavy Reverie is Buffalo Killers' fifth studio album. The nearly decade-long journey from the band's 2006 inception has been blessed by a few milestones, including an extended tour with the Black Crowes, whose front man, Chris Robinson, called Buffalo Killers "one of the best fucking rock'n'roll bands in the world." Highly inspired,

the band wrote half of their critically acclaimed *Let It Ride* album while on that tour.

My first impression of their latest was that the Rolling Stones and Black Rebel Motorcycle Club had a baby, one that was born howling and playing nothing but hooks. Yet as the album unfolds, the melodic tunes and catchy lyrics prove

that Buffalo Killers have a rockin' sound all their own—one that keeps your head rhythmically bobbing and inspires you to keep the volume cranked. This is an album to jam to while you clean the house, navigate the hot curves of the highway or simply lie in the grass gazing at the sky. Smoke two joints and groove out hard.

The album opens with "Poisonberry Wine," a sweet and gritty song that wakes you up while allowing you to sleepily take in the morning hour. One of my personal favorites is "Cousin Todd," which is fun and engaging—just remember that Cousin Todd is a better junkie than you! "January" is the perfect song for when you're "in the back of your car ... smoking joints ... / Oh, the stars." The whole album flows thusly and is packed with great songs, making *Heavy Reverie* the perfect vehicle to elevate your mind while you're rocking your face off. *Mary Ought Six*



Buffalo Killers
Heavy Reverie
(Sun Pedal Recordings)

MUSIC RECOMMENDATIONS



The Skull Defekts
Dances in Dreams of the Known Unknown
(Thrill Jockey)



High Spirits
You Are Here
(High Roller)



Get Pure
(Alive NaturalSound)

The third installment of this Swedish punkstuff's quest for cosmic clarification further transcends the noise/experimental underground that spawned it. Ex-Lungfish shaman Daniel Higgs intones oblique poetics while the brutally minimalist band sneaks in some aural insurgency via

In the studio, High Spirits is a man named Professor Black. Live onstage, High Spirits is a five-headed monster providing a real invitation to travel skyward. At the height of their powers, they're chuggin' like Priest, soarin' like Scorp, tuggin' on your heartstrings like Def Leppard. On High

I knew nothing about Mount Carmel before *Get Pure*, and despite the ubiquity of the Internet and its endless information, that's the way I want it. Offering another reason to pay attention, Alive NaturalSound Records is delivering tomorrow's classic rock today: Bringing their label

the clanging motodrive of "Pattern of Thoughts" and the artcore riffsludge of "The Known Unknown." A riff-laden set that simmers with surreal electronic FX, *Dances in Dreams* is an enigmatic yet curiously tasty elixir that turns rock inside out to reveal its hidden wonders. *John Payne*

Spirits' sophomore studio effort, however, the professor falls short of the high-water mark left by his debut and the band's exhilarating live show. There are some golden moments here—especially the eponymous theme/anthem—but I'll be crankin' the demos 'til the van pulls back into town. *Pat Delaney*

mates John the Conqueror to mind, Mount Carmel conjure a heavy, blues-centered and blastful amalgamation of Thin Lizzy, Blue Cheer and Lynyrd Skynyrd. *Get Pure* dares you to prove that the law of volume is something you will not only stretch to its scientific limits, but also far exceed. *Shawn Abnioxous*

BOOK RECOMMENDATIONS



DON1: The King From Queens
Louie "KR.ONE" Gasparro
(Schiffer)

Art refuses to be suppressed. With little training and zero gallery interest, the graffiti artists of the 1970s sprayed their visions across the New York City transit system and into the eyes of millions of captive commuters. Stalking the train yards of Queens, with a can of Rust-Oleum in one

hand and a spliff of Acapulco Gold in the other, DON1 became a master of the form while still in high school. Though his career was cut short by an accidental PCP overdose, his touching story is recounted here in a wonderful book by his contemporaries and protégés.

Chris Simunek

GAME RECOMMENDATIONS



Bravely Default
Nintendo 3DS
(Square-Enix)

Square-Enix proves it is the reigning king of RPGs with the release of *Bravely Default*. Brilliant visuals and complex gameplay make this title a potential candidate for Game of the Year. The player will spend hours level-grinding both their characters and their specific job to come up with shockingly powerful

attacks, running through immensely detailed landscapes, and crawling in and out of bizarre dungeons. The plot is thought-provoking and often demented in the classic style of Japanese RPGs. A must-have for fans of the genre, or for the gamer who seeks a real challenge.

Mike Caiazzo

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MUNCHIES**Avocado Dragon Cake**

Cali's two greenest treasures in one delicious dessert.

I first found out about avocado cake via an old recipe book of my mother's. This particular recipe's sinful combination of ingredients is as old-school as Wonder Bread, but it yields a modern-day stoner delight.

Though there's plenty of butter to play with in this cake, when I recently discovered that green dragon sugar can be made in two hours, I had to go that route. For an extra boost of green to this

already super-green cake, mix an eighth of shake or ground bud with the butter and heat in a double boiler for 40 minutes. Strain out the weed and let the butter come to room temperature. You can speed up the thickening process by sticking it in the fridge. Remember, getting über-baked is optional: Know thy tolerance and the tolerance of thy friends.

Also, you caught that part earlier, right? Two-hour green dragon sugar! A lab here in Oregon recently told a medible friend that the THC and cannabinoid levels are pretty much the same after two hours as two months. Leaving the plant in longer makes the tincture greener, but the lab says that's only chlorophyll. This is good news, as you can now make the sugar quickly as needed. Make this recipe by the batch, as you'll want your house stash of sugar to be stronger. This is to the dose. *Mary Ought Six*

DRAGON CAKE

**¼ cup Everclear
¼ oz ground cannabis buds
1½ cups organic sugar
1 cup mashed avocado
1 cup unsalted butter, slightly softened
1 egg
⅔ cup milk
2½ tsp. lemon juice
1 tsp. cinnamon
½ tsp. nutmeg
½ tsp. salt
1 tsp. baking soda
1½ cups cake flour
½ cup chopped walnuts
8 large dates, chopped**

Put the weed and Everclear in a glass jar and let soak. Shake the jar every half hour, including the first and last, for two hours. Discard the plant matter. Pour the infused alcohol over the sugar and mix well. Spread the sugar on a cookie sheet and bake at 150°F for around an hour, stirring

every 10 to 15 minutes until the alcohol is baked off. Remove from oven.

If you're using cannabutter instead of regular butter, make it while the weed is soaking so that it has time to firm up before you make the batter.

Mix the mashed avocado, green sugar, butter and egg until well blended. Mix the milk and lemon juice together separately. Add the cinnamon, nutmeg and salt to the batter while the lemon juice sours the milk. Dissolve the baking soda in the sour milk. Alternate adding the milk and flour to the avocado mix and then fold in the walnuts and dates.

Lightly coat a 9" x 12" pan with butter. Pour in the batter evenly. Use a spatula to clear the bowl and even out the corners. Bake at 300°F for one hour, then cut into 16 squares and enjoy! *Stones 16*.

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Ingredients

- Step 1** Put your tincture in a 1-quart non-stick saucepan and heat on low. Cook until almost all of the alcohol has evaporated (approx. 5 minutes). It should look like molasses.
- Step 2** Add emulsion, sweetener, reduced juice, and extract and stir. Remove from heat and let cool for five minutes.
- Step 3** Add cold juice. Then slowly add gelatin, starting with the unflavored. Sprinkle around the top evenly, and repeat with the flavored jello. Then whisk to combine and let sit for 10 minutes.
- Step 4** Put back on the stove on medium heat, and cook around 5-7 minutes, until gummie mixture dissolves and looks clear.
- Step 5** Pour into a glass measuring cup. (The pouring spout will make it easy to put into your molds.)
- Step 6** Pour into molds. Let cool in freezer for 15-20 minutes.
- Step 7** Remove from mold and eat.

- 1/2 cup MagicalButter tincture (we recommend using alcohol tincture, cook off the alcohol and add 1/4 cup reduced juice)
- 1 1/2 cup Pom Wonderful Juice, or your favorite juice. (1 cup of juice will be reduced to 1/4 cup)
- 1/2 teaspoon lemon emulsion (We recommend LorAnn brand)
- 1 teaspoon flavoring extract, to complement flavor of the gummies you're making
- 4 tablespoons of Monk Fruit or Stevia Sweetener (I recommend using "In The Raw" brand)
- 4 - 1/4 ounces unflavored gelatin
- 2 - 3 ounces flavored jello of your choice

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The War's Unhappy Birthday

By Chris Simunek

It's often the case that when tragedy occurs, a nation will take advantage of the subsequent outrage and confusion to grab land, resources or power, much like looters emptying out an electronics store in the middle of a riot. Such was the case after 9/11, when America enacted the Patriot Act, began illegally eavesdropping on millions of its citizens, and started two ill-conceived and intractable wars in Afghanistan and Iraq.

Iraq was probably the larger debacle, a conflict that America lied its way into, citing Saddam Hussein's nonexistent nuclear- and chemical-weapons programs and phantom links to 9/11. We can condemn Saddam's brutal reign all we like, but the obvious fact is that the United States attacked that country without any plan for keeping the peace among its disparate ethnic and religious factions once he was gone. Now, a year and a half after the exit of American troops, Iraq is engaged in a full-on holy war, staggering enough in its level of violence as to make the deceased dictator look like a neighborhood thug by comparison.

Unlike the invasion of Afghanistan, Operation Iraqi Freedom met with massive resistance stateside, which I covered in "Let 'em Eat Freedom Fries" in our July 2003 issue. It's now been historically proven that those of us who opposed the Iraq War were right, and those who dragged us into it were

wrong. The statements made at the time by the neocons who engineered the invasion would be laughable now if those same people weren't responsible for the deaths of nearly 5,000 US troops and well over 100,000 Iraqi civilians.

"I can't tell you if the use of force in Iraq today would last five days, or five weeks, or five months, but it certainly isn't going to last any longer than

that," Donald Rumsfeld announced in 2002. "Iraqi democracy will succeed, and that success will send forth the news, from Damascus to Tehran, that freedom can be the future of every nation," Bush proclaimed in 2003. Those of us with a firmer grip on reality predicted the current catastrophe. We marched in Washington, or stood in massive cattle pens along First Avenue in New York City, and ultimately watched impotently as our leaders planted the seeds of the chaos that is in full bloom today.

High Times' founder, Tom Forcade, was a product of the radical movement that opposed the Vietnam War. And we have always called out America's leaders for their corrupt military campaigns, whether it was the covert war against leftists in Central America, the war against Saddam in Iraq, or the war against marijuana here at home. There are plenty of news outlets these days that provide (supposedly) objective reporting. At *High Times*, we prefer to tell the truth. *



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**MARKET ANALYSIS**

Prices by the ounce

The US Price and Kind indices essentially held steady in October after significant drops in average price last month. The Mids Index, however, dropped \$36 from its previous month's average, plummeting all the way down to just \$248 an ounce. That marks a 53-month low for Mids, as the index last finished at \$248 in May 2010.

US Price Index
YTD Average: \$305**Kind Index**
YTD Average: \$382**Mids Index**
YTD Average: \$272**Schwag Index**
YTD Average: \$101

(Blue Dream)
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TRANS HIGH MARKET QUOTATIONS

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Arizona	Tucson	Skywalker OG	400
Arkansas	El Dorado	Blue Dream	400
California	Sacramento	Blue Dream	150
	San Francisco	Grand Daddy Purps	250
Colorado	Colorado Springs	Sour Diesel	225
	Denver	Headband	165
Delaware	New Castle	Silver Haze	350
Florida	Miami	Girl Scout Cookies	500
	Tallahassee	Silver Haze	320
Georgia	Augusta	Purps	480
Indiana	Indianapolis	Bubba Kush	350
Kentucky	Fort Campbell	Purple Kush	360
Maine	Portland	East Coast Sour Diesel	330
Maryland	Elkton	Jilly Bean	375
Massachusetts	Boston	Strawberry Cough	320
Michigan	Benton Harbor	Blue Dream	225
	Detroit	Larry OG	350
	Flint	LA Confidential	200
Minnesota	Minneapolis	Cheese	350
	St. Paul	Purple Urkel	400
Mississippi	Canton	Blue Dream	325
Missouri	Springfield	Sour Kush	300
Nevada	Las Vegas	Holy Grail Kush	350
New Hampshire	Concord	Sour Diesel	325
New Jersey	Hoboken	Chemdog	400
New York	New York	Girl Scout Cookies	350
North Carolina	Raleigh	Green Crack	400
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	Coshocton	Green Crack	200
Oregon	Portland	Cheese	180
Pennsylvania	Philadelphia	G-13	375
Tennessee	Memphis	OG Kush	350
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Did you know Cannabis was used at the Chernobyl site to help pull radioactive contaminants out of the soil?

They used Cannabis for soil remediation because it's an accumulator plant that absorbs nearly everything in its environment. While soil remediation sounds great, the fact is, the cannabis plants were now highly radioactive and had to be disposed of properly as well.

COULD YOU IMAGINE A PATIENT SMOKING RADIOACTIVE WEED?

It's a scary thought, isn't it? In short, cannabis accumulates everything in its environment—including potential toxins—and retains them even after harvest.

In other words, whatever your plants accumulated while growing—you are now smoking. That's why you need to know how to protect yourself and your patients from potential medical marijuana toxicity.

The entire story, along with many other little-known, yet vitally important facts are revealed in a new Bulgarian Academy of Sciences white paper titled:

"HOW TO PROTECT MEDICAL MARIJUANA PATIENTS FROM HEAVY METAL TOXICITY ... WHILE RAISING BUD WEIGHT, THC, AND CANNABINOIDs"

The author of the white paper, Julian Karadjov, PhD, reveals facts medical marijuana growers absolutely MUST know. Here are just a few:

- The little-known fact that makes Cannabis totally different than other plants and why not knowing this can endanger the lives of your patients!

- Why the nutrients you feed your plants

could actually be turning them toxic (make sure you check your bloom boosters for this one common ingredient that could be toxic)

- Exactly which heavy metals are toxic and how to protect your patients from ingesting them (There are some heavy metals that are completely harmless. Get the complete list inside)
- Surprising plant tissue sample results of Berlin, Hash Plant, and White Rhino strains of medical marijuana (goes completely against what most growers think is needed to maximize size, weight and potency!)
- The TRUTH about so-called "Pharmaceutical Grade" salts and chelates
- Why you can't trust regulators and other government "watch dogs" to make sure the hydroponics nutrients you feed your plants are safe

• The 2 biggest MYTHS about natural and synthetic chelators and their role in toxic metal absorption.

• How to guarantee—with 100% confidence—that your medical marijuana is a pure and harmless as filtered drinking water!

• How the University of Mississippi achieved 21% more yield from their cannabis plants with one simple change to their feeding program

• How to nearly DOUBLE the amount of THC and other cannabinoids your plants produce the very next run you start (new test results from Hedron Analytical Inc.)

• As Seen On TV: the dangers of Medical Marijuana Cadmium poisoning (and how to help your patients completely avoid this risk!)

And there's more too ... The dangers of "home brew" hydroponics nutrient formulations ... African Marijuana cadmium dangers ... plus other little-known facts most growers never hear about.

The bottom line is: if you grow medical marijuana and care about the safety of your patients at all (or you use marijuana yourself) then you must read this white paper.

It's free to access and available online. Simply visit

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Legalization and the cannabis industry's exponential growth means that there's no shortage of opportunities to get your foot in the door. Check out our top pot jobs and start working now! *By Jen Bernstein*



Cannabis legalization has created thousands of new jobs. For the first time in American history, an economy based on growing, selling and using legal marijuana exists. In fact, the industry is developing at such a rapid pace that it's hard to put a number on just how big it is.

In the first two months after legalization, Colorado made \$3.4 million in new tax revenues, with initial projections estimating another \$184 million over 18 months. As more states legalize cannabis, we could be looking at a \$10 billion industry by 2018.

"Over 10,000 marijuana-industry jobs have been created in Colorado alone," says Dan Kingston, founder of *420Careers.com*, a cannabis job board that posts five to 10 new job listings a week.

"And thousands more will be created as more states legalize."

Kingston, who resides in the medical-marijuana-friendly state of Arizona, has seen firsthand the exponential growth of pot-related jobs. "Graduates coming right out of school typically can't find a job in their field of study, so they're coming in droves to entry-level jobs in medical marijuana," he notes.

High Times, celebrating its 40th anniversary this year, has been in the business of cannabis from the beginning. Taking advantage of the many relationships we've cultivated over the years, we recently sent out our first *High Times Cannabusiness Survey* to determine the financial temperature of the industry; the results are shared here. And since so many people want to know how to get a job in the cannabis industry, we've compiled ideas and advice on ways to get started.

5 Tips For Success

1) Determine your interests

There are many ways to enter the industry, and hundreds of different jobs—but what appeals to you? Do you love to grow? Have an aptitude for business or a flair for sales? Knowledge and a passion to learn everything you can about your field are important. Employers are always impressed in an interview when you know about their work culture and how they operate.

2) Know your skills

It's useful to envision just how you can succeed. For example, there are plenty of people who grow really good weed, but maybe you can grow really good weed *and* code software. Examine what you do best and then offer up your unique skill set.

3) Invest your time

If you don't know much about the industry or don't have a unique skill to set you apart from the competition, try joining an organization that supports the cannabis movement. Volunteering your time shows a deep level of commitment that makes you attractive to employers. And while volunteering, you'll be networking: You'll meet industry leaders, up-and-coming entrepreneurs—and potential employers.

4) Invest your money

If you have the means and don't want to miss out on lucrative ground-floor opportunities, look into investing in things like real estate for cannabusinesses, or cannabis-extract or agricultural equipment. Attend industry trade shows and, if you see potential in a cannabusiness, offer to become partners for a percentage or stake in the company. If you're an accredited, large-scale investor check out venture-capital groups like the High Times Growth Fund which pairs potential investors with existing businesses, or an investment network like the ArcView Group which hosts *Shark Tank*-like pitch sessions where they hear from potential entrepreneurs and then connects them with investors. Buyers beware: Pot stocks are high-risk investments and extremely volatile—so think again if you're trying to get rich quick.

htgrowthfund.com; arcviewgroup.com

5) Get a higher education

If you're really green and want to start out in the industry, then go to school. High-school graduates should look into universities that have a college of agriculture and life sciences, like Purdue, Texas A&M, or Iowa State. If you want to be closer to the heart of things, the University of Humboldt in California has an excellent botany program.

However, those colleges won't teach you how to grow marijuana or run a cannabusiness. For that, you'll have to attend institutions of higher learning. Every month, Oaksterdam University in Oakland, CA, offers basic and advanced indoor horticulture seminars, which include four days of intensive instruction, and 26 hours of grow training from expert teachers. They also hold seminars across the country. 420 College offers weekend seminars on how to open a dispensary, as well as workshops on cultivation training, across the US. And at the Cannabis University of Colorado, students can attend the All-in-One-Day class for \$250, which covers everything from growing your own meds to understanding Colorado state law.

oaksterdamuniversity.com; 420college.org; cannabisuniversitycolorado.com



Once a seasonal job, trimming marijuana is now full-time work.

13 Top Pot Jobs

Colorado, California, Washington and Arizona are currently the easiest states to find employment in. And as more states approve medical marijuana or move toward legalization, more opportunities will be created. Here's our baker's dozen of top pot jobs:

1) Trimmer

Someone has to manicure that lovely, sticky weed into the beautiful nugs you purchase at the dispensary, so why not try your hand at it? This entry-level position isn't glamorous, but it is essential to every large-scale grow operation. Teams of trimmers work their way through pounds of bud and are paid hourly, or by the weight of their finished product. Whether you're a full-time employee or freelancer, trimming bud is an excellent way to learn the ins and outs of the trade. Sammy Saltzman, who has risen through the ranks of Denver's dispensaries, recommends Hemp Temps, which staffs cannabis companies. "Hemp Temps will schedule you at a warehouse, or you'll trim for the dispensary they assign you to," Saltzman says. "If you're looking for full-time work, you can network at your temp job with the hopes of maybe one day getting hired by a dispensary that likes you and your work ethic."

hemptemps.com



Budtenders make recommendations based on a patient or consumer's needs.

2) Budtender

This dispensary or co-op employee works behind the counter, listening to customers, and recommending strains to match their preferences. Good budtenders are patient, and develop a rapport with their clientele. Handling and dispensing weed doesn't have to be done by an expert, but you do need a state license; in Colorado, budtending positions are fairly easy to come by, but getting a license is not. The state's Medical Marijuana Enforcement Division application process is backlogged. Applicants are photographed, fingerprinted, and pay a \$75 fee. Oh, and you have to pass a background check too.



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3) Grower

Becoming a marijuana grower is one of the most rewarding—and confusing—paths one can take in the legal marijuana industry. Laws differ from state to state, and in California, from county to county and sometimes even city to city. Under California law, you're only allowed to grow your allotted amount as a caregiver or as part of a collective. California cannabusiness consultant Liana Held suggests anyone interested in growing, "speak with a lawyer and set up a not-for-profit mutual benefit corporation. You can grow six mature, 12 immature and possess eight dried ounces for each



person in your collective. Once they are supplied, you can sell the overage to a dispensary." As far as dispensaries go, it's a buyer's market, and it's likely you will walk away disappointed at the amount you were paid for your "legal" bud.

Then there's Washington, which voted to legalize recreational marijuana. There was a brief window to submit license applications to become a producer, packager or retailer in the industry. The state received over 2600 applications, and has thus far approved only 70. There is going to be a great need for experienced cultivators as more are approved. A grower looking for work can go to the Washington State Liquor Control Board website and search public records to see the name, addresses and approval status of each company.

Since medical marijuana businesses are vertically integrated in Colorado, Ryan Cook, general manager of The Clinic, recommends growers who have obtained an occupational license to send their resumes directly to medical and retail marijuana centers to get started. canorml.org; liq.wa.gov; colorado.gov

4) Caregiver

With medical marijuana legal in 22 states and the District of Columbia, becoming a caregiver may have crossed your mind—especially if you have a genuine interest in helping patients who can benefit from cannabis's medicinal qualities. Though the definition varies from state to state—and not every state allows for caregiving—a caregiver is someone who can grow, possess and provide medical cannabis for a registered patient or patients. If you're interested in learning more about becoming a licensed caregiver, visit your state's government homepage or go to: marijuana-caregiver.com.

first figure out if there's an actual need for your product. Poll your friends, get feedback, and fine-tune your inspiration. Before you apply for a patent, you'll need to have a finished product—that means building and testing your invention. Then you'll need to file an application with the US Patent Office. When it comes to retail, the High Times Cannabis Cup is a great place to start turning your idea into cash.

6) Edibles Chef/Cook

Do you love to bake? Why not apply your culinary skills to the cannabis industry? Personnel with a kitchen background are in demand; many patients and consumers prefer to eat cannabis rather than smoke it. CNN Money recently profiled Joe Hodas, Dixie Elixir's chief marketing officer, who said: "As demand for the product grows and stigma falls, I see the [edibles] industry as a tremendous potential creator of jobs." Dixie Elixir is poised to expand operations into Arizona this year. In Colorado, manufacturers of edible medical-marijuana-infused products must have a food-handling certificate and complete a basic training course. Regulations vary from state to state but to work for any Colorado cannabis company, employees must also have a MMED occupational license.

7) Lobbyist/Activist

One entry-level cannabis-industry position that's in demand is as petitioner. Full-time positions aren't numerous, but there are plenty of projects that need signatures gathered to gain ballot access for pro-pot initiatives. Whether you're looking to get involved at the local, state or federal level, Allen St. Pierre, executive director of NORML, says that many cannabis policy reform groups seek public participation. He recommends norml.org for legalization, votehemp.com for hemp and safeaccessnow.org for medical cannabis. With more than 150 state and local chapters, NORML is the "backbone of the cannabis law reform movement," says St. Pierre.

8) Lawyer

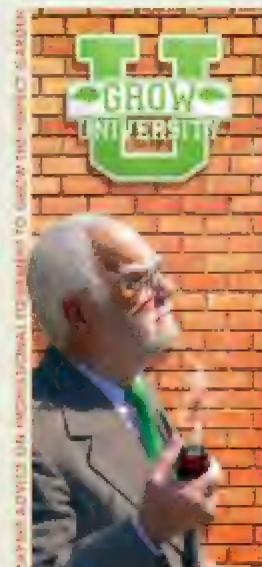
Since Washington legalized recreational cannabis use, the Seattle law firm of Harris & Moure has been inundated with new clients. Harris & Moure lists its services under the Canna Law Group and specializes in cannabis-related regulatory compliance, applications, taxes and insuring businesses; it has also branched out to include trademark and copyright protection. Though other cannabis-related legal firms are rare, Allen St. Pierre says

"Every once in a while, a product emerges that we clearly see will revolutionize the industry. Each time, we see these products first in the pages of High Times or at one of our High Times Cannabis Cup expos. We are a portal for people looking to get into the business of pot."

—Danny Danko, High Times senior cultivation editor

5) Product Manufacturer

Among stoners, there's no shortage of ideas—all it takes is one good hit and the creative juices start flowing! So take that great idea for a pot product and turn it into profit. To make your dream a reality,



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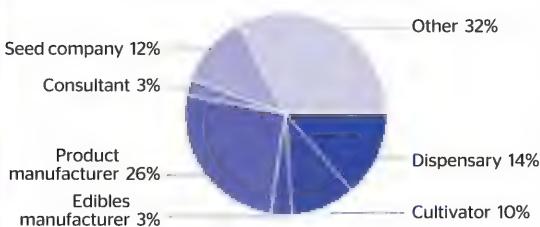
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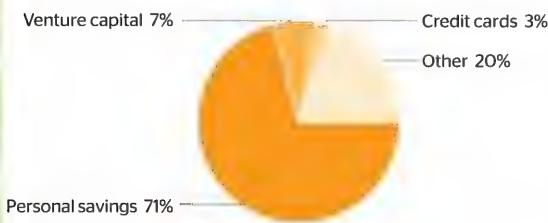
The Results Are In

Examining the numbers of our new industry

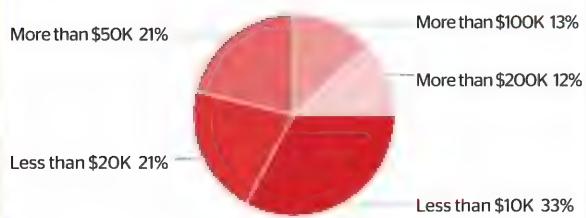
What is your primary business?



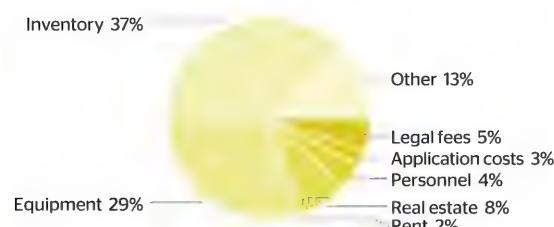
How did you fund your cannabusiness?



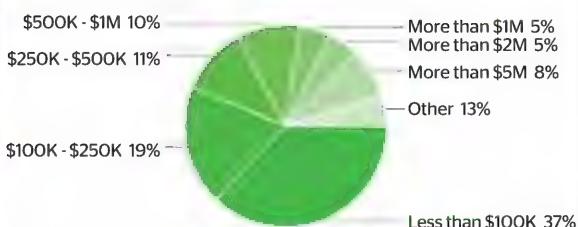
How much were your start-up costs?



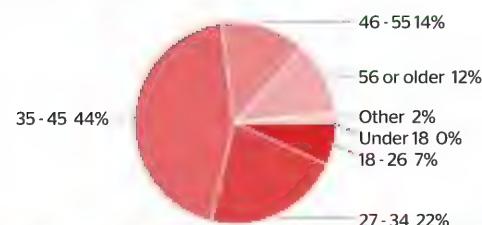
What were your main start-up costs?



What is your annual revenue?



How old are you?



the SF law group Pier Five Law does great criminal and appellate work—and he speaks highly of the firm of Evans & Cutler in Massachusetts. For those fresh out of law school, St. Pierre recommends branching out into cannabis law reform by joining NORML's Legal Committee; attending NORML's annual legal seminars; and volunteering with a NORML chapter to help challenge cannabis prohibition laws and draft reform legislation.

cannalawgroup.com

security staffed by former military or law-enforcement officials (which bodes well for veterans looking to get into cannabis-related business). Video surveillance is also required by law, and must be installed and operated in any area that contains marijuana (cashiers' spaces, safes, parking lots, growrooms, etc.), so the time is ripe to learn how to install and maintain surveillance units.

cannasecurity.com

12) IT/Computer Programmer

Know a thing or two about ones and zeros? Take your code-writing skills to cannabusiness. It's standard operating procedure for any successful business to maintain a website with up-to-date information. Colorado's demanding seed-to-sale laws require every step of cultivation to be tracked—and software like MJ Freeway has helped revolutionize and streamline data. But the industry needs IT professionals to make it all work. The cannabis-specific job board WeedHire regularly lists open positions for e-commerce managers, tech bloggers and programmers, so be sure to check frequently for new posts, or set up a job alert to notify you.

weedhire.com

13) Consultant

If you know how to set up a grow-room, why not help others get started? Maybe you're really good at managing an office, or marketing a product. Whatever it is that you do like a pro, there may be a cannabis-industry consultant position for you.

Kenny Morrow of Trichome Technologies is a grower with 30 years of experience in large-scale cultivation. We asked him how a consultant might get a foot in the door. "The first thing you need is a background in the field. You need a solid resume, great references and verifiable real-life experience. Then you need to find a client. I suggest you go to cannabis conferences and trade shows, like the various High Times Cannabis Cups, or the National Cannabis Industry Association's Cannabis Business Summit. Oaksterdam University is a good place to get experience and to network and they have travelling conferences throughout the country. The most important thing is hit the bricks and advertise your services."

cannabiscup.com; thecannabisindustry.org; oaksterdamuniversity.com

10) Accountant

Every cannabusiness needs a professional who can keep accurate books. From loans to private equity, cash management, payment processing and handling taxes, accountants who understand the industry will increasingly be in demand. Seminars and events tailored to marijuana financials, such as the CannaBusiness Money Show, are offered through sites like Marijuana Business Daily.

mmjbusinessdaily.com/money

11) Security

With more than 500 medical and retail dispensaries in Colorado, security is a major concern for cannabusiness owners—especially when they're dealing in cash-only sales and a product that is considered illegal by the federal government. Kyndall Cowan of Canna Security America says that because of high demand, CSA now offers armed guards and vehicles with bulletproof windows. "Getting the product from the grow to the dispensary is a huge safety concern," she says. Dispensaries can also hire



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PROFILE: **Brooke Gehring**
COMPANY: Patients' Choice, Live Green Consulting
OPERATIONS: Four locations in the Denver area

Brooke Gehring was a commercial banker before making the bold decision to leave corporate America for the cannabis industry in the summer of 2009. Currently, Gehring operates Patients' Choice of Colorado, a medical marijuana company with four dispensaries (three recreational and one medical) in the Denver area.

What did you do to get your foot in the door?

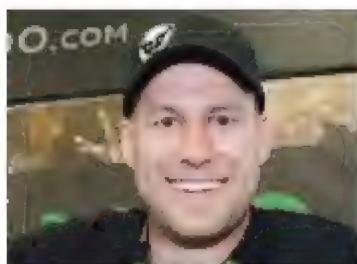
I was persistent and curious. I had to network and introduce myself to people—professionals, public figures, policymakers, legislators and anyone else willing to talk about marijuana as a business. I once sat through a five-hour-long City Council meeting in Denver just for the chance to introduce myself to one council member.

What skills did you have that set you apart or helped you?

My experience of being a director of compliance for a national brokerage company during the rise and fall of the market gave me a solid foundation for understanding regulations and how licensing authorities work and enforce rules under state and local governments. I also had corporate retail experience that helped me out immensely when setting up the front end of the dispensary business.

Did you take any classes or further your education?

All of my learning in this industry has been in addition to my undergraduate studies. Keeping up to date on all of the current regulations, understanding the legislative process, attending council meetings, being proactive on the policy boards and participating in the state rulemaking process has been my way of educating myself on how to operate a compliant and successful multi-city marijuana company.



PROFILE: **Tony Verzura**
COMPANY: RiverRock
OPERATIONS: Two locations in the Denver area

Tony Verzura was studying film in 1996 when he was injured in a car accident and prescribed oxycontin. Verzura weaned himself off the habit-forming pharmaceutical with cannabis and had changed career paths when a lawyer friend called him in 2009 with a business proposition. Together they created RiverRock, a professional caregiver service.

What did you do to get your foot in the door?

I created the door—and the opportunity—from 250 bucks and a business plan.

How was RiverRock funded?

I started RiverRock with three lights and six plants and then expanded into a few basements prior to getting the facility where we're currently located. In order to get that facility, we had to pitch the idea to family, friends, and to businessmen that wanted to take a chance.

Did you build a team of people to help you?

We went from two or three people to more than 80 employees and consultants working under one roof at RiverRock. We assembled teams for processing raw medicine into concentrates, hash, topicals, edibles, pills and transdermal products. We assembled a legal and compliance team along with a full-blown in-house construction team.

What were some of the challenges when you were starting up?

It seems like every three to six months, this industry changes so much that it's a miracle any business could survive. Today, the biggest challenge is not keeping up with the regulations, rules, tracking and testing requirements, but the ability to bank and run our businesses without tax laws subjecting us to unfair rulings that have nothing to do with our Colorado business models.



PROFILE: **Sam**
COMPANY: Dab OTG
OPERATIONS: Dab-pen sales

Sam and his business partner Ben created Dab OTG. The company began taking out ads in *High Times* and selling vape pens from its booth at the 2013 US Cannabis Cup in Seattle. "After Dab OTG was named Best Overall Pen in the January 2014 'Vapor Pen Review' issue," says Sam, "we couldn't keep the glass in stock."

What did you do to get your foot in the door?

Having a degree in business definitely helped me to start the company, but I met my partner while doing something I love—and that's seeing live music at Terrapin Crossroads. It was coming up with an innovative idea that opened the door for us. Getting in touch with *High Times* helped us a lot, too—it's a good, solid connection in the industry.

What were some of the challenges when starting your cannabusiness?

It was hard to find dependable people to help create our product. Since we sold out of our product so quickly, another initial challenge was keeping our inventory up. We were only a couple of months old when we were named "best pen," but through those sales we were able to reinvest back in the company and stock up on inventory.

What advice do you have for people starting a cannabusiness?

Think about something new or better that you can bring to the industry. If you're trying to start your own company, then do it on your own—but if you don't have the means, find someone else who can help you. For us, we try to remember where we came from ... and that was standing in front of Phil Lesh, bassist for the Grateful Dead.



PROFILE: **Butcher**
COMPANY: SourBhotz Medibles
OPERATIONS: Oregon dispensaries

For the New York City born-and-bred Butcher, getting started in the cannabis industry meant saying goodbye to everything he knew and loved on the East Coast, cashing out his personal savings and moving to Oregon. "Having been in the food industry for 15 years and knowing my way around the kitchen was a huge asset in creating and developing ingestible cannabis products," he says. "As of now, I'm a one-man army as far as producing, packaging and marketing my edibles."

What did you do to get your foot in the door?

First, I made sure to have a solid product and branding. With the R&D and marketing strategy complete, I hit the ground running: I made cold call after cold call and delivered sample after sample. Some dispensaries were inviting, some rude, and others gave me the run-around. I stayed humble, with open ears, and true to myself, the brand and what I wanted to accomplish.

What's the first thing you had to do to start your cannabusiness?

Well, regulations are constantly changing, so the first steps I took when I moved to Oregon was to research the requirements and file the appropriate paperwork with the state.

What are some skills you'd recommend for budding ganjapreneurs?

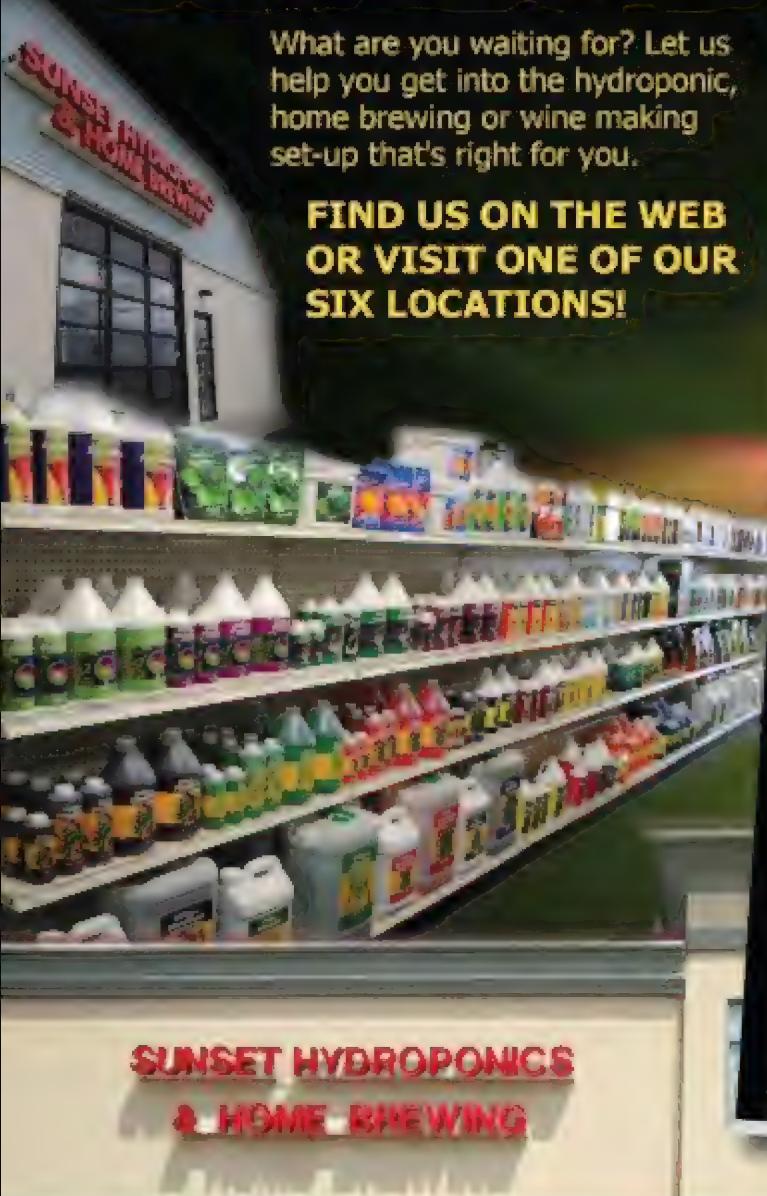
Always ensure a level of integrity and transparency in what you do. Protect your intellectual property, but don't shy away from speaking openly and honestly with other people—it increases confidence and promotes legitimacy. Customer service is everything, so try to be available as much as possible. Even if it's only one day a week, go check in or make a call and show that you care. And always be the face of your business—never delegate that! 🌶

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A screenshot of the sunsethydro.com website. The header features the store's name and a search bar. On the left, a sidebar lists product categories like Nutrients, Soil, Roots, Cloning, Greenhouse Equipment, Pots, Fermenting Equipment, Personal Hygiene, Tools, Grow Chambers, Training Wheels, and Pot Scales. The main content area displays several product categories with images of the items: "Nutrients" (two bottles of General Hydroponics Nutrients), "Soil" (two bags of soil), "Roots" (two bags of root stimulator), "Cloning" (two bags of cloning solution), "Greenhouse Equipment" (two bags of greenhouse equipment), "Pots" (two bags of pots), "Fermenting Equipment" (two bags of fermenting equipment), "Personal Hygiene" (two bags of personal hygiene products), "Tools" (two bags of tools), "Grow Chambers" (two bags of grow chambers), "Training Wheels" (two bags of training wheels), and "Pot Scales" (two bags of pot scales). A yellow starburst graphic on the right side of the page contains the text: "ENTER PROMOCODE: **growgh** FOR 10% OFF".

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TC Labs staffer Josh is joyous as he processes fresh extract.



From Clones to Concentrates

At TC Labs in Colorado, producing high-quality concentrates is the name of the game. *Story & Photos by Dan Skye*

Over the past two years, TC Labs has built its brand by working closely with Colorado's top cultivators, processing the very best plants into high-powered concentrates. The company has designed and constructed its own state-of-the-art "dab lab," including an expansive onsite grow op. Relying on a variety of genetic lines from star breeders like \$Mike and JJ-NYC of

Top Dawg, Tierra Rojo and Mendelian Dave of TR Seeds, and The Docta from Archive Seedbank, TC Labs painstakingly chooses each individual strain for its resin and terpenoid development, average concentrate yield, and general growth characteristics.

And the company has started to reap the rewards that this search for excellence has sown. TC Labs took home second place at the 2013 U.S. Cannabis Cup in Denver for Best

Medical Concentrate; it also shared first place at last year's Cannabis Cup in Amsterdam for Best Seed Company Concentrate, and grabbed top honors for Best Medical Concentrate at the recent U.S. Cannabis Cup in Denver.

TC Labs is now expanding its operations to provide high-quality concentrates to all legal and medical states. Here's a look at how these master extraction artists work their magic!

Visit tclabs.com or extractoutfitters.com.





(This page) The finest cannabis concentrates begin with the best cannabis—free of disease, pests and pesticide residuals, and cultivated to full maturity. TC Labs seeks out top-notch dispensaries that maintain these high standards and establishes working relationships with them. The choice of genetics will greatly determine the final product. Yield, effects, color and flavor all begin with the strains themselves and how well they're cultivated. In-house cultivators focus their attention on manipulating the grow environment, light spectrum and nutrient program to ensure that the strains are cultivated, harvested and cured to perfection.



The harvest and curing process can be the most difficult to master. Dry too quickly and it will spoil the aroma, leaving the bud smelling like hay. Dry too slowly and the buds can develop mold. TC Labs' drying rooms are split into separate areas with individualized climates, allowing the maintenance of proper humidity and temperature levels in this perpetual-harvest operation.



1. Once the bud has been dried and cured to perfection, lab technicians break down the plant material and begin packing it into the column of the facility's closed-loop unit. This column is capable of handling approximately 1,000 grams of plant material.

2. Once the column is hooked up to the unit and brought to pressure, the solvent is released, soaking the plant material inside. For TC Labs' purposes, this soaking process is kept to a minimum. The solution is then released into the collection basin of the unit and heated slowly; 80 percent of the solvent will be boiled off in this part of the extraction process. A pump is added to decrease run times and accelerate the recovery process.

3. Once the pump finishes recovery, the unit is disassembled. The solution is now scraped from the collection basin and placed on a tray.

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(Above and left) TC Labs uses laboratory vacuum ovens for the next step in the process. The oven introduces heat and pressure to remove the solvent left in the solution. The butane and hash solution will "boil" as the remaining solvent continues to release its bonds.



After several hours in the vacuum oven, the finished slab is cooled and then visually inspected by a quality-control technician.



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1. Wet Betty

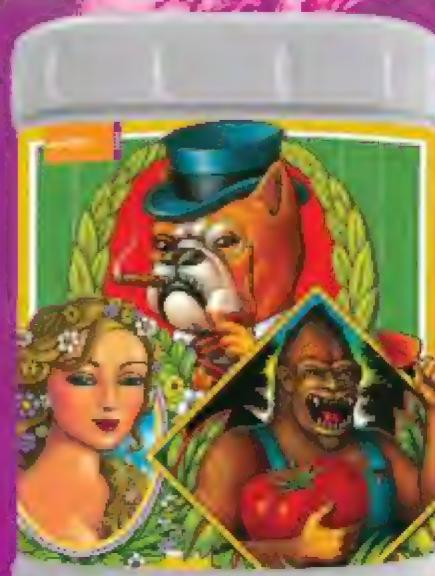
Wet Betty is a non-ionic surfactant (also called a wetting agent) that lowers the surface tension of your nutrient-rich water allowing easier spreading and uptake of nutrients into your plants. That means your plants get the nutrients they crave faster and more efficiently than ever before. Plus, scientific testing by the leading plant PhD in surfactant studies shows Wet Betty (by itself) consistently increases plant growth by an average of 6%!

2. F1

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3. H2

Introducing long-chain Humic Acid to your root zone is like building a "condensation complex" for beneficial bacteria and fungi, giving them an optimal structure to flourish in.



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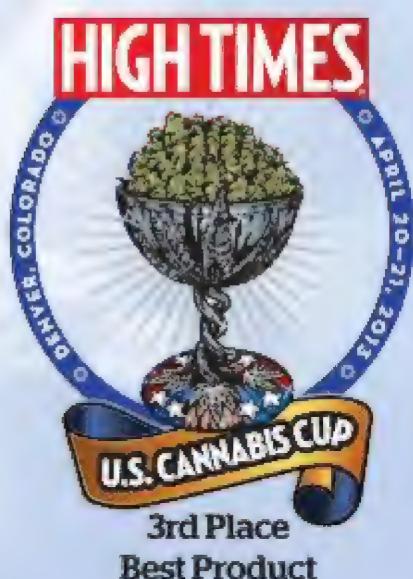
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ALWAYS GROW!

Everything you need to know about the best indoor setups.

Story & Photos by Nico Escondido



THE GROW

Before you head out to your local hydro shop, there are a few things to consider beyond just what type of grow system will fit in your available space. How does the system work exactly, and how much time and attention will it need? Are there moving parts that can break? Is there a lot of water involved that can flood a room or attract pests? And perhaps most importantly, what kind of medium will it require?

Here's a complete review of the most popular grow systems out there today, detailing how they work and what methods and mediums serve them best. So take a look at your space, pore over these pages, and then hop online or in your car to buy what you need to get up and growing quickly, easily and effectively!

A large indoor cannabis grow room filled with many green plants.

Whether you're going big or just starting out with your own home grow, there's an ideal system for everyone.



Passive vs. Active

To begin, we must first understand the differences between passive and active systems. As you might guess, a passive grow system is one that requires minimal maintenance. Passive systems have no moving parts such as pumps or spray emitters, since they rely solely on capillary action to move water from a reservoir to the medium. These setups are great for beginners because they use soil or, more typically, soilless mediums and require the grower to manually water and feed the plants, thereby keeping new growers in their gardens for longer periods of time—the very best way to learn about plants and horticulture.

Examples of passive grow systems include wick-system setups, standard window boxes or simple gardens using potted containers. These types of systems are recommended for first-time growers, even if you have grander designs later on. Plants can be finicky, and before you spend loads of money on expensive equipment, it's best to learn on the cheap.

For the intermediate to advanced grower, active grow systems can be a lot of fun as well as extremely rewarding, both in terms of quality and yield. Active systems encompass almost all of the other grow systems available on the market. These deliver water and nutrient solution to the medium and root zone

using moving parts and energy. Cannabis grows quickly, which makes it an ideal match for active hydroponic systems.

Hydro vs. Non-Hydro

To break it down even further, active grow systems can be divided into two categories: hydroponic and non-hydroponic systems.

Strictly speaking, hydroponics is the cultivation of plants without using soil. However, these days very few indoor growers actually use soil. Instead, they prefer a soilless mix that is most often composed of a peat or sphagnum moss base. These mixes have a look and feel very similar to regular topsoil, but they usually have a few other additives mixed in (more on this later).

New growers sometimes think that using soilless mixes means that the grow system cannot be hydroponic—but, technically speaking, as long as the system doesn't utilize actual earth soil, the system is classified as hydroponic. The only true non-hydroponic systems in use these days are outdoor or greenhouse gardens, and even then many growers use a soilless mix, as these mediums are usually sterile and come pest- and disease-free. Some of these mixes even have mild organic nutrients added to the medium, giving them an edge over conventional soils.

About Soilless Grow Mediums

When choosing a soilless medium, it's important to read the ingredients label carefully and have a good idea about what you desire beforehand. Most soilless grow mediums are mixtures of the following components:

Peat. One of the most popular soilless-mix bases, peat is the partially decomposed remains of vegetation and flora that have been preserved underwater or in a semi-aquatic state. Its look, feel and texture are similar to fine earth soils, and it is heavily loaded with organic minerals. There are three types of peat: peat moss, peat humus and reed sedge, with the first two being the more popular commercial forms.

Sphagnum moss. Sphagnum moss (or sphagnum peat, as it's also called) is the dehydrated residue or living portions of bog plants; it falls in the plant classification system under the genus *Sphagnum*. It's usually pathogen-free, always light in weight, and has an extremely high capacity for water retention. Sphagnum is more desirable as a grow substrate than standard peat; however, its high cost has limited its commercial use.

Coco coir. If peat is the most popular choice as a soilless-mix base, then coco coir is a very close second. It's an extremely adaptable substrate that can serve many functions. When ground to a finer consistency, coco coir makes an excellent base for soilless mixes, and when shredded into fibers or chunked into small croutons, it can serve as a great additive to peat-based mixtures, as these forms help aerate the medium. In any form, coco coir—which is made from coconut husks—is highly absorbent and can retain moisture while holding its form for long periods of time.

Vermiculite. Vermiculite is an aluminum silicate mineral common in igneous and metamorphic rocks. Mined heavily in both the United States and Africa, vermiculite expands noticeably when heated, making it lightweight and insoluble in water. Mostly used as an additive for soilless mixes, vermiculite is neutral in reactions and offers excellent buffering to the root zone while also holding moisture and nutrients very well due to its high cation exchange capacity (CEC). This makes it one of the best soilless additives available.

Advanced Grow Tip: The term "peat-lite" refers to peat-based mediums that contain perlite or vermiculite.

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Types of Hydroponic Systems

There are quite a few commercial hydroponic systems out there today, available in grow shops and online. Some of them come as turnkey solutions for indoor growrooms, while others are scalable and customizable depending on your needs. The turnkey models generally include flood-and-drain or deep-water culture (DWC) units. The latter are used more by intermediate to advanced growers and usually include top-feed setups that allow for a range of mediums and plant sizes.

Let's start by taking a look at some of the easier-to-use beginner systems and then work our way into the more customizable aspects of indoor grow systems.

Ebb-and-Flow

These systems are among the most popular with first-time hydro growers and use a simple formula for garnering larger yields and potent plants: lots of water and lots of oxygen to the root zone. Of course, this doesn't happen simultaneously. In fact, these hydro systems keep the plants' roots in the open air most of the time—but when the water comes, it comes heavy.

Also known as flood-and-drain, these setups use flood tables, reservoirs, and pumps to feed plants water and nutrient solution and require mediums that can retain moisture for long periods of time. Pumps on timers flood the tables for short cycles and then drain the solution back into the reservoir (although some growers choose to drain the solution to waste and do not recycle it). The most popular grow mediums used in ebb-and-flow systems are rockwool and HEC (hardened expanded clay). Each one has its pros and cons, but for beginners, the choice is most often rockwool because it's easier to start seeds or clones in these plugs and then transplant them into larger cubes or slabs. The one big drawback here is that rockwool offers little help to beginners in the way of buffering for young plant roots as they adjust to harsher nutrient programs.

Advanced Grow Tip: An easy workaround in this regard is to start seeds or clones in peat plugs and then transplant them into netted pots filled with HEC. However, HEC may not hold moisture long enough for new plants, and thus more frequent waterings are required, which in turn necessitates more attention from growers. Another option is to create an HEC/rockwool crouton mix in which to nestle the starter plugs.



Deep-water culture (DWC) systems like this one can be easily tailored to fit any space.



Aeroponic cloners like this one are great for accelerated root growth.

Deep-Water Culture

Deep-water culture setups are great for beginners and more advanced growers as well. DWC—also known as “bucket systems” or “hydro pots”—utilizes large buckets or containers, with netted pots sitting in a hole in the top so that the roots hang down into the container. These buckets are linked to a single reservoir, with the size of the reservoir ultimately determining how many plant containers can be linked together.

The system works by pumping water or nutrient-rich solution from the reservoir through irrigation lines to the base of each plant site. The plant containers then fill with water from the bottom up, saturating the roots. After a few minutes, the containers drain and recycle the water or solution back to the reservoir, with short-cycle timers repeating the process several times a day. Other DWC systems allow the water to sit until it's completely wicked up by the plants' roots and then refill the buckets using float valves as the trigger.

Advanced Grow Tip: There are quite a few different DWC systems, and most can easily be modified by intermediate-level growers. These systems will produce large, bushy plants, but they require a lot of attention and plenty of lighting.

NFT and Aeroponics

NFT (nutrient-film technique) and aeroponic systems are similar in that they both require the plants' root zones to be completely enclosed in order to achieve the best results. For beginning growers, this can be a problem, as access to the root zone is important in identifying early problems within a garden. Additionally, there are a lot of moving parts in both systems that require time and attention.

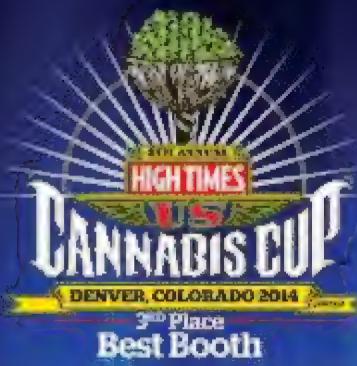
NFT systems generally utilize a conduit in which the plant containers sit with the roots hanging out. Netted pots or basket containers are often used here. The roots grow down into the conduit, usually large-diameter piping or a rectangular trough. A thin film of nutrient solution is then pumped in and passes along the bottom of the root zone as the dangling roots wick up water and minerals.

Aeroponic systems work in much the same way—however, instead of a thin nutrient film passing through a conduit, these systems utilize sprayer heads that periodically emit a fine mist to the root zone. This mist is caught by the fine hairs of the roots, and the nutrients get absorbed easily.

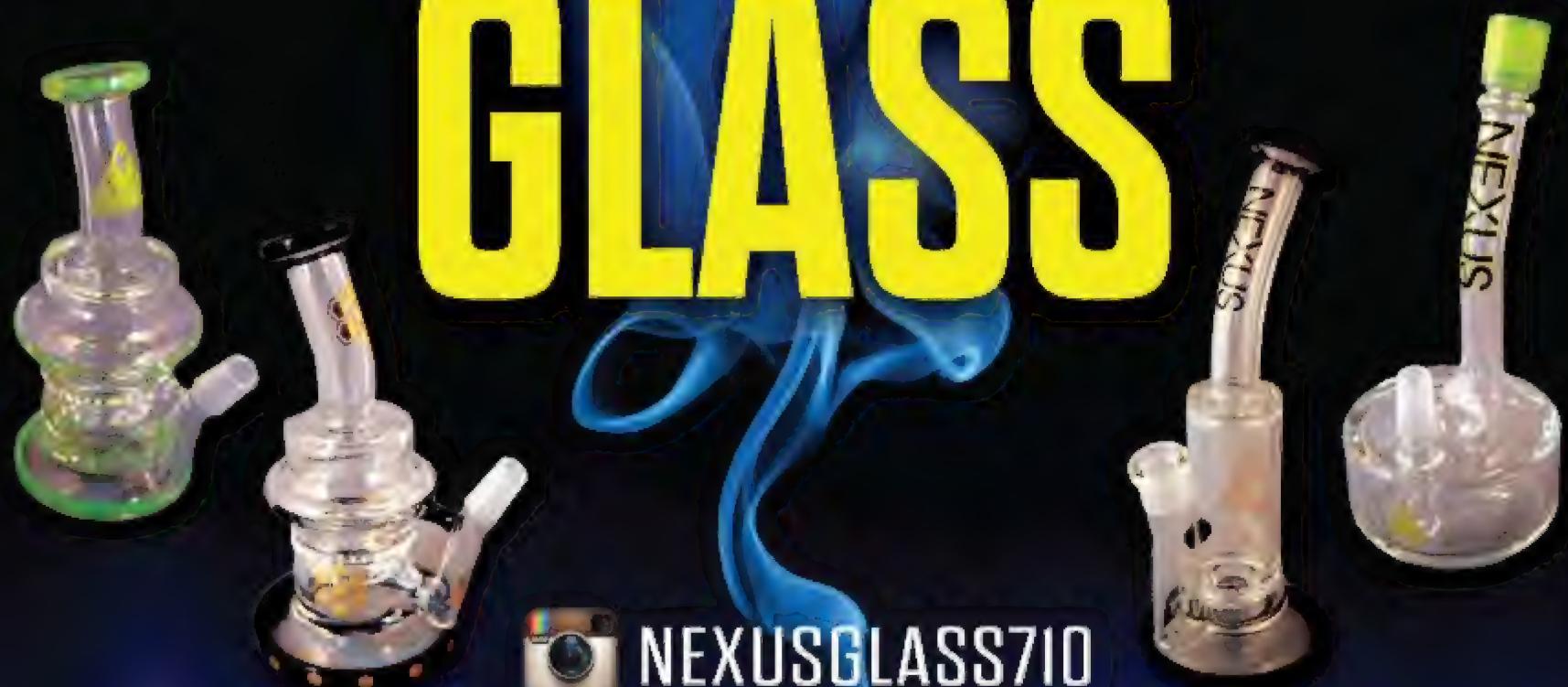
Both NFT and aeroponic systems can achieve large yields and high-quality flowers, but they can also be difficult to manage, as they offer little to no buffering for delicate root systems. Getting the NFT solution to the proper flow levels in the conduit, or ensuring that all spray emitters (and the spaghetti lines feeding them) have the proper pressure in aeroponic systems, can be challenging for first-time growers.



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Types of Hydroponic Grow Mediums

Rockwool. Rockwool (or mineral wool) is produced from various mineral sources. Once superheated, it is spun into fibers and then pressed into cubes or slabs as it cools. Mineral wool is used both for rooting, such as in rockwool plugs or small cubes, and as a grow medium in the form of larger slabs or crouton beds. Rockwool is sterile and inert and can be used in all kinds of mixtures or as a stand-alone substrate. The primary benefit of rockwool is that it retains substantial amounts of H₂O while also allowing ample air to penetrate the root zone. One major drawback is that rockwool is not a forgiving medium, offering the least amount of buffering for roots than almost any other option (the only exception being HEC). Growers using rockwool need to know their nutrient programs and strains very well.

HEC (hardened expanded clay). When heated, HEC can produce a tough and stable substrate that is porous and capable of absorbing decent amounts of water. However, like rockwool, HEC offers no nutritional value. Both HEC and rockwool can be difficult to master because they require the grower to intimately understand nutrients and ppm levels within the solutions for feeding. That being said, HEC is a great medium for use in heavy-watering hydroponic systems. The clay substrate is weighty enough to keep peat or rockwool plugs with rooted seedlings or clones in place during heavy water flows, and it also allows for easy drainage and extra aeration. Remember, roots breathe in oxygen, so airflow in the root zone is integral to healthy plant development.

Perlite. Although perlite is mainly an additive, some advanced indoor growers will go with levels in excess of 50 percent when adding it to their peat- or coco-based mixes. Perlite is a gray-white volcanic medium, usually mined from hardened lava flows. The crude ore is crushed and screened, then heated in furnaces to over 1,400°F, which expands the particles to small, sponge-like

kernels that are lightweight and highly moisture-absorbent—their key feature.

Advanced Grow

Tip: Creating custom blends using 50 percent perlite added to peat or coco bases is an excellent way



Seedlings in
soilless mix.

to dial in indoor grow operations and match your strain to your medium. Cover the entire surface of any peat- or coco-based medium with perlite to help lock moisture in.



Soilless Grows

As discussed earlier, soilless grow systems are still technically considered hydroponic because they use non-soil substrates as the primary medium. However, these grow systems do not conform to the general notion of hydroponics these days, as many of the standard hydro systems available are not a good fit with soilless mixes. For example, a grower who attempts to use a peat-based soilless mix as the medium in an ebb-and-flow system will find that it creates quite a mess, with the loose medium dislodging from the root-ball and being carried out of the plant containers to block drains, dirty reservoirs, and clog pumps and feed lines. In this type of setup, a more stable medium is required.

This is where top-feed systems come into play. These are currently among the most popular methods of indoor cultivation, as there are a variety of models that can be deployed and a variety of mediums that can be used in these setups. Let's take a closer look at how these grow systems function.

Top-Feed Drip

Of the three types of top-feed systems outlined here, the drip system generally provides the most constant flow of water and/or nutrient solution to the plants. In these systems, the plants are best placed in individual containers so as to ensure that each one gets enough water and nutrients. These systems often use flood trays to catch runoff, which can either drain to waste or circulate back to the main reservoir.

From the reservoir, water is pumped through main lines up to the tables, where smaller irrigation or spaghetti lines feed the individual plant sites. Stakes are used to hold lines near the base of plants, and drip emitters at the end of the lines slowly drip water into the medium. Some growers choose to have a constant drip going during the "daylight" portion of the photoperiod, while others use timers to trigger drip cycles.

Advanced Grow Tip: Using a solid medium such as soilless mixes or larger rockwool slabs aids in staking drip emitters to the plant sites.

From top: Rockwool cubes on top of rockwool slabs in a top-feed system; hardened expanded clay (HEC) being used in an ebb-and-flow hydro system; young clones inserted into fabric bags of a coco-perlite medium.



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Top-Feed Spray Emitter

Spray emitters are the most popular top-feed system out there today. Many growers prefer the specialized sprayer heads over a drip-emitter system because they provide a more even watering throughout the entire medium at each plant site. In all top-feed systems, growers generally use two to four emitters per plant site, but when four spray nozzles are staked around one plant base, very even

saturation can be achieved.

The only pitfall with this system is that it's not ideal for some nutrient programs, especially synthetic nutrients that are heavy in salts. This is simply because salts build up quickly in thin irrigation lines and often clog spray emitters, which rely on tiny holes in the nozzle heads to create pressure and an even distribution of nutrient solution.

Top-Feed Timed Flow

These systems are almost identical to drip-emitter systems but rely on a timer to deliver a periodic flow of water from the reservoir to the plant site. This option can be useful in large, commercial-format grow operations with hundreds of plants, or in setups where the grower prefers to have only one emitter at each plant site. In this system, a nozzle or emitter isn't necessary, as open-ended irrigation lines can be simply staked into the medium ready to flow.

Depending on the medium, growers can choose various lengths for each watering period and use short-cycle timers to generate several feedings per day.

Advanced Grow Tip: Most advanced growers use top-feed systems with soilless mixes as their medium. However, it is often recommended that you measure the saturation point of your medium and then set your short-cycle timers to match that duration and then shut off. Next, measure the amount of time it takes for the medium to dry out, then add 15 minutes and set that period as the interval between watering cycles.

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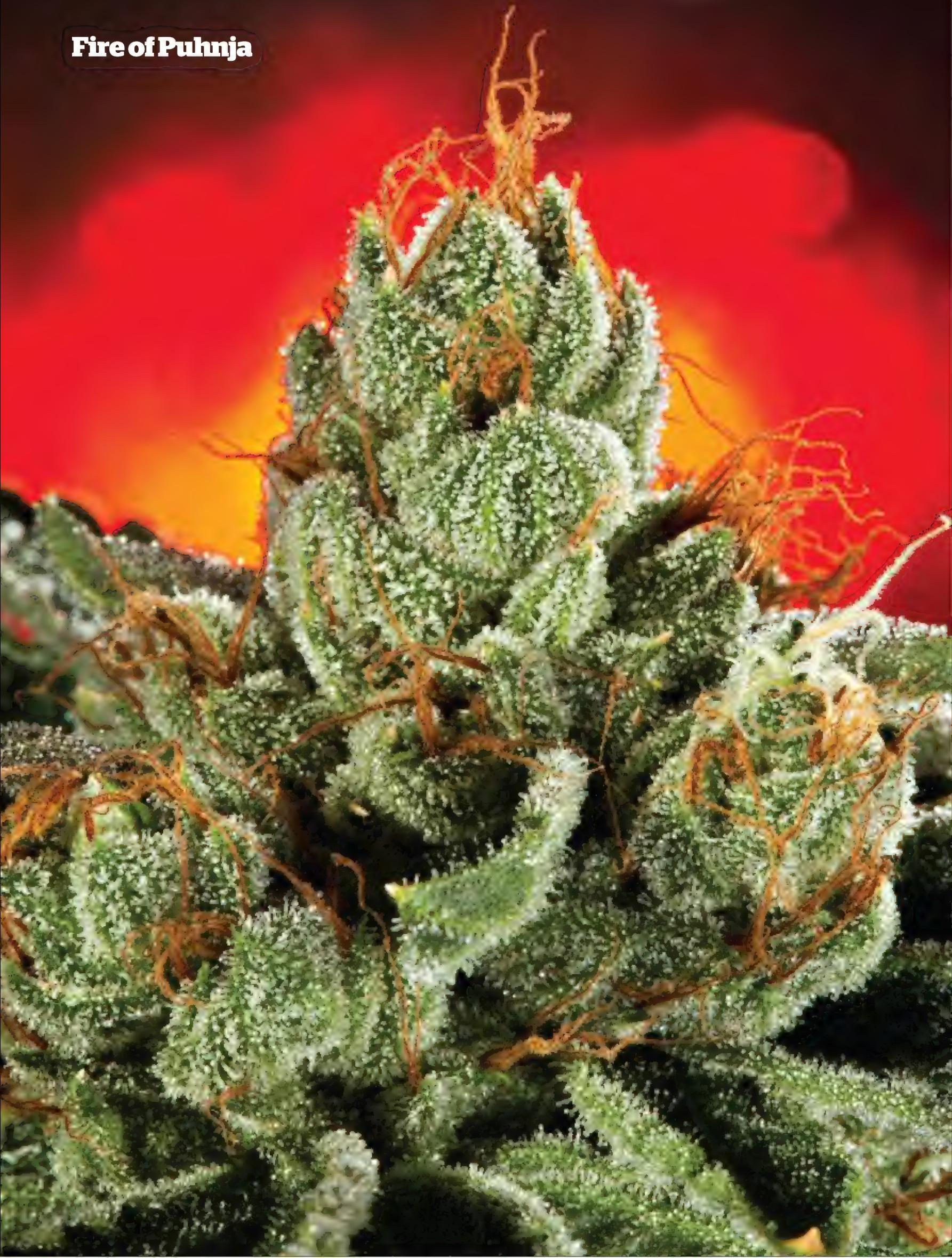




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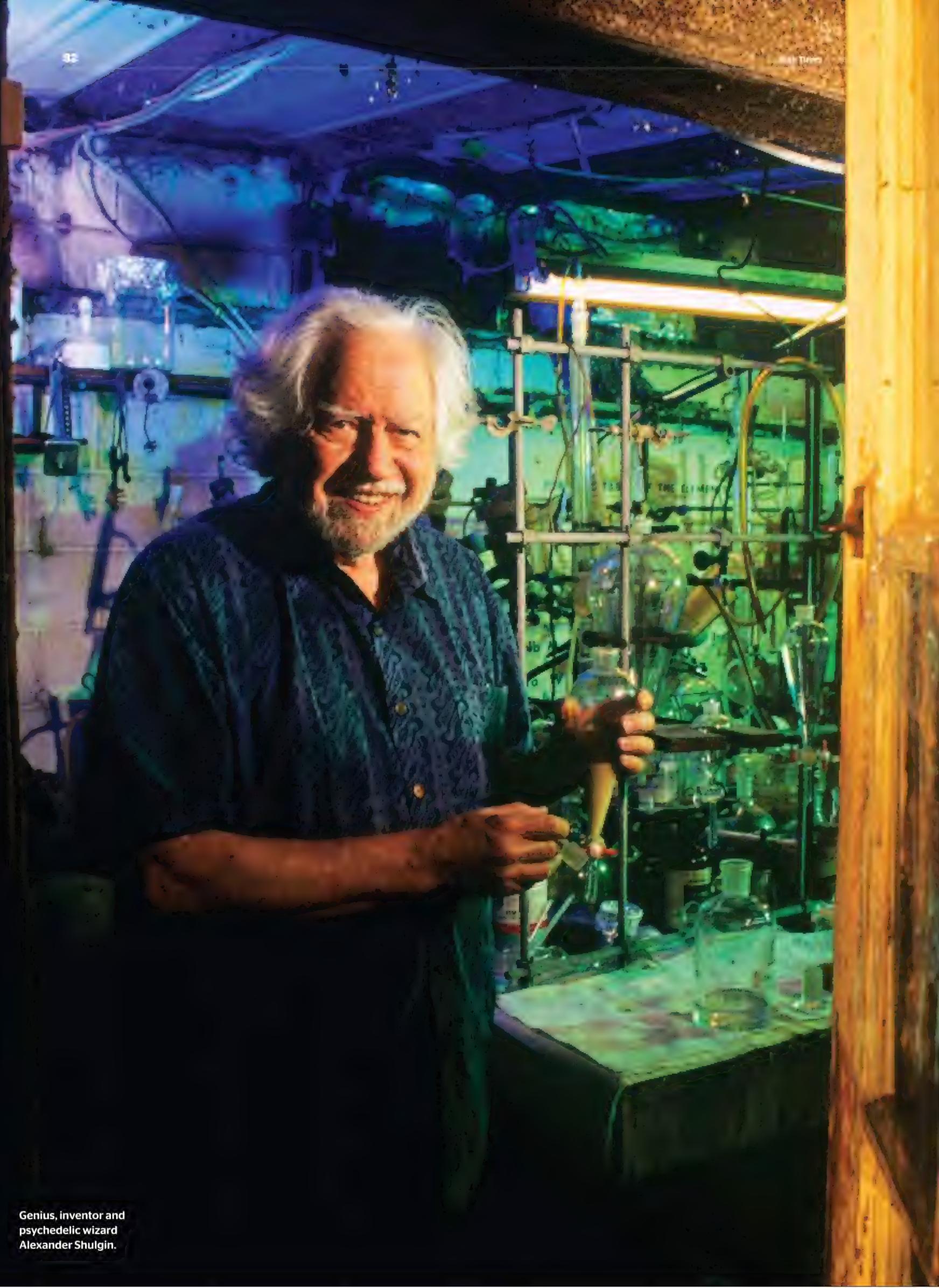
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The Last Alchemist

Alexander "Sasha" Shulgin, perhaps the greatest psychedelic research chemist of all time, passed away on June 2, 2014, just 15 days before his 89th birthday. Unaware of his dire health, *High Times* had paid a visit to his laboratory the previous week. Though obviously ill, Sasha exhibited his trademark humor, asking why we had come so far to visit. When one looks at his life and achievements, the answer to that question is clear. *By James Kent*

East of Oakland, and overlooking Mount Diablo, a hobbit-hole has been dug into the side of Pleasant Hill. It's a modest structure, gilded with a patina of rust and rot, swallowed by years of English ivy. But inside this humble cottage, a great White Wizard has crafted his alchemical hideaway. On most evenings, the Wizard could be found there hunched over bubblers and boilers, listening to string quartets, condensing spirits from aromatic wisps and vapors, occasionally releasing a plume of steam and stench. Around him was a cathedral of colored jars, bottles, flasks and vials, each one holding a potion or powder of unimaginable power, labeled with glyphs that only another alchemist could decipher. A bottle of sweet-smelling oil might be a deadly poison or a powerful aphrodisiac; a jar of white powder could be a miracle cure or a pinch of the philosopher's stone.

This place may sound plucked from fantasy, but I can assure you that it's real. It's the laboratory of the famed psychedelic chemist Alexander Shulgin, only thirty minutes from Oakland in Lafayette, CA. Of course, this wizard was more likely to be found in ethnic print shirts than white robes, and the string quartets came from the tinny speaker of a beat-up transistor radio via the local public radio station. But other than a few artifacts of the modern age, this alchemical hideaway could have been the timeless lair of any 17th-level magic user worth his salt. And in this laboratory, Alexander Shulgin designed, synthesized or discovered more psychedelic and psychoactive molecules than any other chemist who's ever lived.

Standing in Shulgin's lab just days before his death, I am struck by a sense that Alexander—"Sasha" to his friends and family—may be the last of his kind. At 88 years old, Sasha Shulgin is the last of America's gentlemen scientists—self-employed innovators in the mold of Einstein or Tesla. These were educated men with the personal means to pursue the science of discovery purely out of interest. Shulgin was unconstrained by corporations or academic institutions demanding results. Free to follow his passion, he was arguably the most prolific psychoactive chemist of the 20th century, producing hundreds of novel psychedelic compounds during the course of his career. Looking over the rows of jars with faded and yellowing labels, I can only wonder how long each bottle has been sitting there. Some hold substances synthesized last year; others were forgotten four decades ago, added to Shulgin's ever-growing list of projects put on the back burner. But now his days of working in the laboratory are finally over. The bubblers and boilers sit cold and dry; the inscrutable glyphs stare silently across a maze of tubing and glassware.

Legend has it that the Wizard retired to this alchemical hideaway in the late '60s, but the story starts long before then. Even as a child, Shulgin was a prodigy. Both of his parents were teachers, musicians and prolific poets, but even in a family like that, Sasha was a bit of an oddball. "He had to learn how to tone it down—you know, to be funny and engage people," says Ann Shulgin, Sasha's second wife and collaborator of over 30 years. "He knew that if he appeared too smart in front of the other children, he wouldn't be accepted ... he would be the boy that no one liked."

But the child prodigy who hid behind playground fart jokes had an organic chemistry textbook in his backpack that he'd memorized by the age of 11. He attended Harvard University on a scholarship at the age of 15, then dropped out to join the Navy in the middle of World War II. "He always said he was 'hypomanic'—just a little below fully manic," Ann Shulgin recalls. "So he needed to have all these different projects and new experiences to keep his mind occupied." To relax, Sasha would play the viola or piano, often dropping into Prokofiev's *Peter and the Wolf* to lighten his mood.

After his stint in the Navy, Shulgin finished his PhD at the University of California at Berkeley and eventually landed a senior research position at Dow Chemical. His commercial success with the biodegradable pesticide Zectran won him the freedom to study whatever he chose while at Dow. Shulgin's primary interest was in psychoactive drugs—particularly mescaline, to which he'd been exposed in the late 1950s. He was also intrigued by the rumor that prison inmates were using nutmeg as a psychedelic drug and wanted to identify the psychoactive component in the spice.

"You have to remember, back then there was a great deal of hope that figuring out these psychedelic molecules would be the key to solving all kinds of mood disorders—insanity, schizophrenia, psychosis, dementia, the whole lot," says Paul Daley, Shulgin's longtime collaborator and heir apparent. "Of course, we now know it's not quite that simple—but the laws changed shortly after that, and most of the research just ended."

As the legal mood toward psychedelics shifted in the early 1960s, Shulgin left his position at Dow and retired to spend time with his family. The Wizard's beard grew longer and whiter. He played his viola with local string quartets—"because quartets always need a viola," Ann explains. "It's an easier position to fill." And on one of those days, he cleared out the old hobbit-hole, a brick-walled basement left over from a building that had burned down long ago. It was full of spiders and rat droppings, but Sasha had a vision: This would be his laboratory. So he began collecting equipment. "He was a scrap hound," says Daley. "He would collect whatever equipment he could get his hands on. Anytime a local chemical company went out of business or was throwing something out, he'd be in the truck. He would take almost anything—glassware, chemicals, solvents, propane, precursors ... he would take it all."



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Piece by piece, the alchemical hideaway came together, and then the Wizard went to work. Late at night, the old radio played symphonies as Sasha conducted with a glass stirring rod, checking temperatures in reaction vessels, evaporating droplets of colored liquid into clear dishes of oils, waxes or salts. Then, once a pinch of the newly created substance was properly washed and dried, into a little brown bottle it went. A simple but arcane schematic of the molecule was scrawled on a label and taped to the front. These little drawings became known as Sasha's "dirty pictures." And whenever a new molecule appeared, it was tested—first on Shulgin himself, in small doses, and then on a trusted group of researchers and friends. The results were sometimes disappointing; other times, they were spectacular.

Because of his friendly advisor's relationship with the DEA, Shulgin was able to obtain a Schedule I research license that allowed him to synthesize, possess, and test new psychoactive drugs on himself and others. It is impossible to overstate how much of a pioneer Shulgin was in this field. Says Kenneth Morrow, the founder of Trichome Technologies and an expert on cannabis extractions: "There are dozens of active and inactive compounds in cannabis—terpenes, cannabinoids and so on. We take all this stuff for granted today, but Shulgin wrote the first paper on

this back in 1971." (For the record: Shulgin, A., "Recent Developments in Cannabis Chemistry," *Journal of Psychedelic Drugs*, Vol. II, No. 1, 1971.) Back in those days, there was a grove of pot plants in the Wizard's backyard. The federal government had issued Shulgin marijuana tax stamps so he could legally grow cannabis for research purposes. "Today, the cannabis market is obsessed with isolating cannabinoids for medical purposes," Morrow observes. "And here Shulgin was, doing this research 40 years ago!"

Sasha and Ann often experimented with psychedelics together and shared their findings with their confidential research group. "Different people have different body types, so Sasha thought it was important to see how a drug reacts in all kinds of people." When I ask Ann about his favorite among all the chemical compounds he'd created, she answers immediately: "It would have to be 2C-B. He was always very proud of that one. He called it the 'Great Teacher' ... although I preferred 2C-B-FLY a bit more."

But there are so many to choose from: DiPT, 5-MeO-AMT, 5-MeO-DALT, methylene, 2C-T-7—the list goes on and on.

Ann can't say for sure how many trips they shared together; she just smiles and admits, "We stopped counting at around 2,000." This is a mind-boggling number—except when you consider that the total may actually be closer to 4,000.

When pressed to reveal elements of Sasha's darker side or other experiences that were frustrating, Ann pauses and thinks. "He was not a perfect man," she says at last. "He could get moody and stop talking ... the communication would stop." I ask for an example. "Well, you could tell Sasha was in a bad mood if he was cleaning something. If you saw him in the kitchen washing the dishes, you could be sure there was something really bothering him, and you'd better stay out of his way."

Paul Daley confirms that Sasha was the same in the lab. "If he ever hit a sticking point or couldn't figure out why something wasn't working, he would begin breaking down the lab and cleaning things. He'd clean the glassware, the tubing—scrub it all out. And by the time he was done cleaning and setting up, he'd have thought of two or three more things to try ... or 11."

Although Shulgin worked with many types of drugs, his favorites were the phenethylamines, psychedelics that are more thoughtful than overpowering. Ann recalls a time that she and Sasha tried the psychedelic brew known as

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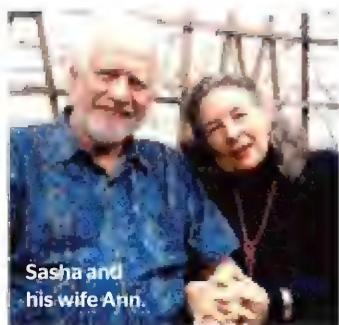
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No Straining "WOW"

ayahuasca with their local circle. "Sasha had a hard time with that one," she says. "I don't think he liked all the different stuff going on, and it just didn't agree with him." Whether it was the constraints imposed by the ritual, the bitterness of the tea, the nausea and heavy hallucinations, or

all of that combined, Ann says ayahuasca wasn't for them. "We tried to finish the ritual, which required taking a second dose—so we took a smaller dose and tried to ride it out." Ann remembers very clearly that it did not go well. "Sasha'd had enough by that point, and later in that trip I heard a spirit or a voice in my head telling me, 'Don't come here again.'"

Shulgin's golden era of unfettered psychedelic exploration continued for more than two decades, his discovery of new chemicals eventually reaching into the hundreds. "He was very proud of his Schedule I DEA research license," Daley recalls. "It was the first thing he showed me when I arrived at the lab in 1977. It was pinned to the wall right inside the door. He just pointed at it and smiled." That little golden ticket gave the Wizard the power to work his magic without interference.



Shulgin had always had a good relationship with the DEA. He was one of their experts—in fact, he was *the* expert; he even taught seminars and wrote law-enforcement reference documents.

But his relationship with the Feds

changed in 1991 after he wrote *PiHKAL* (short for *Phenethylamines I Have Known and Loved*), a "chemical love story" and large-scale reference work that chronicled his discoveries in the phenethylamine family, including his star creation, 2C-B. The psychedelic community saw *PiHKAL* as a groundbreaking work of immense importance; the law-enforcement community viewed it as a cookbook. Shulgin was no longer the DEA's expert; now he was everybody's expert. The Feds definitely didn't like that.

The DEA finally decided to revoke Shulgin's Schedule I license in 1995 and raid his alchemical hideaway, an event now known as the Great Unpleasantness. Police and federal agents stormed the hobbit-hole with search warrants and a decontamination unit. They were stunned to find hundreds of brown jars labeled

with the "dirty pictures" that only chemists could read. Improper storage, ventilation and bookkeeping, general clutter and messiness, and other environmental code violations led to Shulgin losing his license. "Sasha says he gave the license back," says Daley. "But that may be a technicality—or a point of pride. However it went down, they were there to take it from him."

Things changed at the hobbit-hole after that. Sasha's research continued, but at a slower pace, and any work with scheduled chemicals was now strictly forbidden. Jars and vials containing such substances were removed and destroyed, replaced by gaudy pink straws marking their absence. The Wizard went into a funk: He could no longer practice his magic in the unfettered way he once had. He had to work ahead of the law, finding psychoactive compounds that weren't yet known, that were still technically legal but would soon be made illegal. He continued to share and publish his research, and watched Chinese labs make a small fortune from his psychedelic inventions weeks after the research was published. He privately fumed at the DEA, but he kept quiet and kept his head down. The Wizard was an old man; he didn't want to spend the rest of his life in court or in jail.

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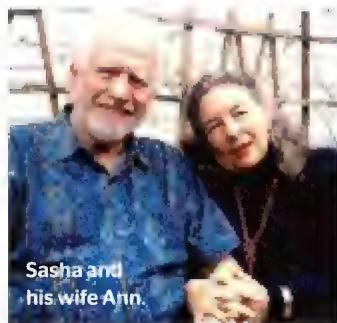
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SHULGIN ARCHIVE PHOTO

The last time I saw Sasha was five days before his death. He was in a wheelchair, almost deaf, almost blind, suffering from dementia, and with liver cancer on top of everything else. I told him I had come all the way from Seattle to see him; he kept asking, "Why? What for?" He was almost entirely out of breath. I couldn't tell if he was confused or just playing with me, but it felt like he was reaching for the energy to make another joke.

Always with the jokes, this guy ... even at death's door. I remember the first time I spoke at length with Sasha, almost 10 years ago, sitting in an Italian restaurant after a conference on psychedelics in San Jose. A young chemist sat next to me asking all kinds of questions, but Sasha only wanted to make jokes—or, worse, puns. "What's the best time to go to the dentist?" he would ask. "Tooth-hurty." Sasha could torture people for hours with a steady barrage of these groaners. "He was relentless," recalls family friend Greg Manning, who spent a magical evening driving around Burning Man in a golf cart with Sasha and Ann. "I kept telling him to stop, and he kept nailing me with one-liners. I was laughing so hard I could barely breathe. He was just destroying me."

But Sasha couldn't summon the energy

to make that last joke. I said goodbye and thanked him for everything he had given to the world. He died a few days later.

It's hard to say what life will be like on Shulgin Farm now that the Wizard is gone. Although Sasha's published work is available from Transform Press, there are still many volumes of unpublished notes that have never been transcribed. "There are

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dozens of Sasha's journals in storage," says Tania Manning, Shulgin's archivist. "We're still in the process of cataloging everything." Tania takes me around the estate and shows me all the plants in the Wizard's magic garden. Back in the hobbit-hole, Paul Daley keeps the equipment clean and occasionally fires it up to continue Sasha's work. "I think there's still great value in researching the duds," Daley says, referring to the many Shulgin compounds that should be psychoactive but, for whatever

reason, aren't. "These chemicals may have all kinds of secondary effects that have never been explored. These could be fruitful lines of research, but exploration in this area has barely started."

Those around him have re-formed the Alexander Shulgin Research Institute (ASRI) to preserve his scientific work, but it's hard to imagine that Sasha's independent and imaginative style could ever be duplicated by a foundation. Many people think of chemistry as technical and boring, but Shulgin never did. "I'm just a cook," he would often say—and from the looks of his alchemical hideaway, he liked things messy and exciting. I remember watching Sasha and my chemist friend scrawling a few "dirty pictures" on a napkin in that Italian restaurant. They drew a series of synthesis pathways from one molecule to the next, each one trying to do outdo the other. "It's so amazing," I said, looking at the napkin. "Adding and removing atoms from existing molecules turns them into totally different molecules. It's like you're rearranging the fabric of reality."

"That's it exactly," replied the Wizard, peering at me from under a bush of crazy white eyebrows. "It's the closest thing we have to real magic." ♣

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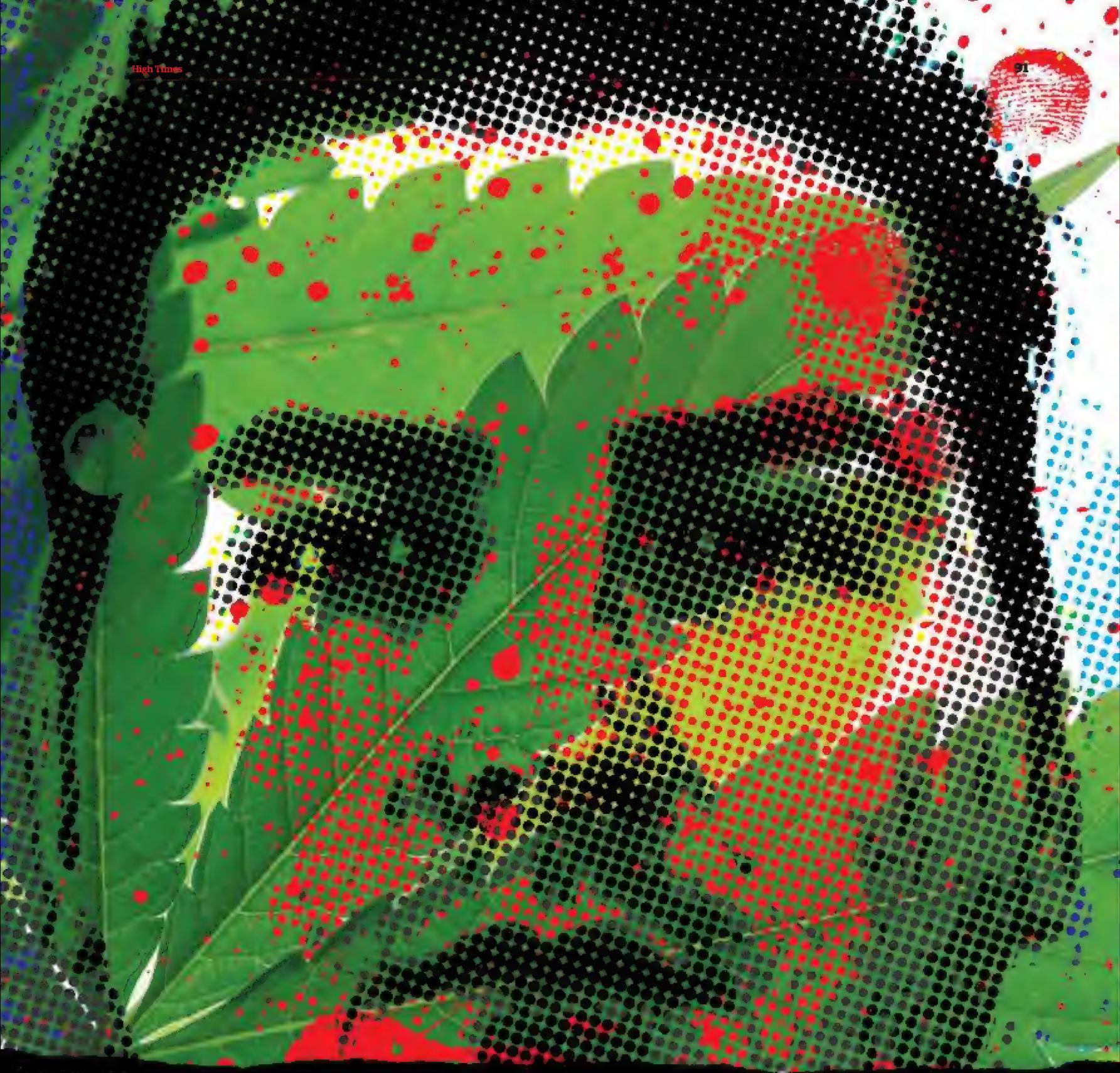
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The Fury in Missouri

Last March, a cannabis-friendly Facebook post set off an Internet firestorm after a pet-care company refused to walk the dogs of one of its pro-marijuana customers on the grounds of religious principle.

What that pet-care company didn't mention was that, 11 years ago, one of its supposedly devout owners was dismissed from the St. Louis police force after marijuana, crack cocaine and a woman with a bullet in her skull were discovered in his car early one morning. *By Chris Simunek*



Dope and Dogma in St. Louis

Faith ... Family ... Dogs."

Those are the words that greet you at the website of Pack Leader, Plus™, which offers pet-care services such as dog walking, boarding, grooming and behavior modification. When you click on the "about" button, there's a picture of company president Brooke Zeigler snuggling with a dachshund. "Since I started the company," she writes, "I noticed that all dogs 'pay it forward' to another dog who may have poor behavior or manners. They will mirror each other and learn at a rapid pace to blend with the Pack better."

Promising "exceptional customer service," Pack Leader, Plus offers the Surveillance Fuzzy Cam®—which allows dog owners to log onto their computers and check out videos of their four-footed friends being cared for. Also of note is the company's mobile grooming trailer, K9 Cabin Cuts, which is staffed by Brooke's husband Tom Zeigler, a onetime law enforcement officer who boasts of providing "the best type of cut for each pet and their owners [sic] lifestyle."

The Pack Leader, Plus website contains many positive testimonials, and even Shawn Moyer—the dog owner who would soon bring unwanted national attention to this small St. Louis

business—has a high regard for the services of Brooke and Tom Zeigler. By his own admission, Pack Leader, Plus was the only dog service in the area capable of attending to the special needs of his two rescued huskies, Bogey and Bacall.

But when the Zeiglers dismissed him as a client over an innocuous cannabis-themed Facebook post, not only was Shawn Moyer insulted at the implication that he and his family were in some way involved with drugs; he suddenly found himself in the undesirable position of not being able to plan future vacations for lack of a proper venue to board his dogs.

But Moyer would have his revenge. Soon, his discontent was beamed across the information superhighway, and a long-buried skeleton from Tom Zeigler's past would be disinterred and paraded for all to see. It's a cautionary tale, to be sure—and if you, dear reader, take away two things from this story, the first should be a reminder that the Internet never forgets; and the second, a warning that hell hath no fury like a dog owner scorned.

One might also keep in mind the wisdom of Scripture, specifically Matthew 7:1: "Judge not, lest ye be judged." So I guess that's three things, but math was never my strong point.

Cookies and Meme

It all started when 13-year-old Danielle Lei and her mother set up a table to sell Girl Scout cookies outside the Green Cross medical marijuana dispensary in San Francisco last February. Danielle's sugary merch proved irresistible to the Green Cross clientele, and she managed to sell 117 boxes of the famous sweets in less than two hours. The story spread quickly throughout the blogosphere: It was the kind of post that the Facebook "share" button was invented for—a cute picture that provided a quick laugh and a fleeting acknowledgement that someone out there had found an ingenious way to make a buck off the stoner stereotype.

One person who found the story amusing enough to pass on was Trish Moyer, a speech pathologist, Girl Scout troop leader and the mother of two young girls. But the simple act of posting that photo on her Facebook page set off a firestorm after she was caustically dismissed as a client by her dog-walking service—the aforementioned Pack Leader, Plus—for offending the religious sensibilities of its two owners, Brooke and Tom Zeigler.

This summary exile from Pack Leader, Plus presented Trish's husband Shawn with a dilemma. Sure, he could try to find another dog-walking service,



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WHITE WIDOW

but Bogey and Bacall didn't really *do* walks. As strays that had been rescued from the purgatorial shelters of St. Louis, they needed vigorous exercise—they needed to *run*—and after contacting nearly 20 other services, Moyer found that the Zeiglers were the only handlers who would agree to indulge his dogs' bestial nature.

On February 28, Shawn sent Tom Zeigler a message via Facebook asking for a reprieve: "We REALLY like working with you guys And for our particularly unique furry family members, we'd basically be up the creek if we couldn't rely on you."

Tom Zeigler's response was stern and unyielding. The Zeiglers were "upset by the pic with the girls [sic] scouts selling cookies outside of a government funded drug house [because] they knew a bunch of whacked out dope fiends would buy a bunch of cookies. We think this is appalling and not funny or cute. [It's] just a disgusting use of children to make more money on the back of drug addicts ... for us, it [is] a religious belief which we will not violate by coercion of man or government."

Shawn felt betrayed. He'd let the Zeiglers' kids swim in his pool while he was

The Zeiglers were "upset by the pic with the girls [sic] scouts selling cookies outside of a government funded drug house."

out of town. He'd agreed to let Bogey and Bacall be photographed for a book the Zeiglers had compiled. But for Tom Zeigler, the issue transcended such niceties.

"Our stance towards drugs of any kind is zero," the ex-policeman wrote back. "If you or your family or anyone you could come in contact with is involved in that we can no longer service you. If your belief is this behavior is okay we can no longer service you ... we will take a stand to our last breath on this topic."

Shawn Moyer was highly displeased with this response. After decrying Tom's actions as "mind-bogglingly [sic] hypocritical for someone who talks so much about their Christian faith," he climaxed his fury with the wish that "a pox" would descend on the Zeiglers' home.

Glass Doghouses

On March 11, I received an email via the *High Times* website that brought this story to my attention. As the email contained only web links with little explanation, I mistook it at first for spam. Then two cryptic sentences and a signature at the bottom caught my eye:

St. Louis County police officer Patricia March was fighting for her life when the question came: Who shot you?

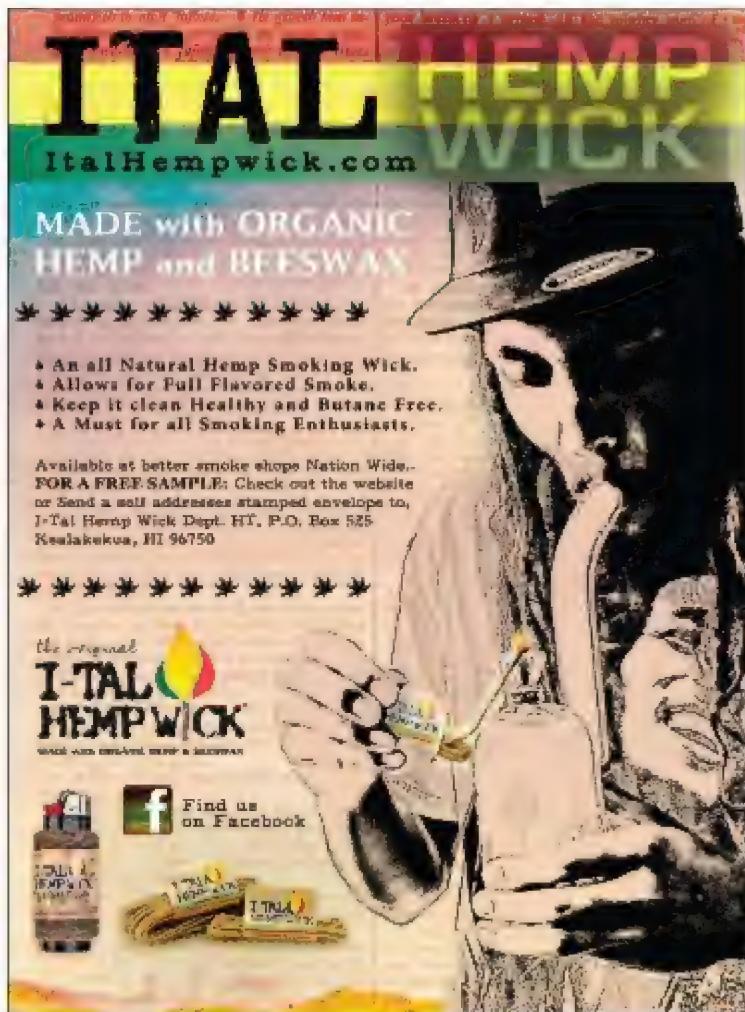
Thomas S. Zeigler shot Patricia March in the face.

Beneath that, it was signed:

*Arigato!
Emma*

The first link took me to an article in the *Riverfront Times* entitled "Dog Walkers to Client: 'We Don't Walk Dogs For People Who Want Marijuana Legalized.'" Shawn Moyer had contacted the *Times* himself: He wanted his indignation chronicled by the local paper of record.

It was the third link, however, that provided the most salacious reading. It described the details of an incident that



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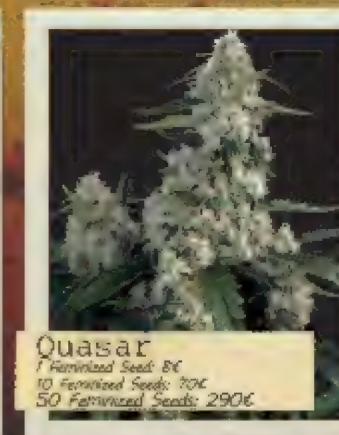
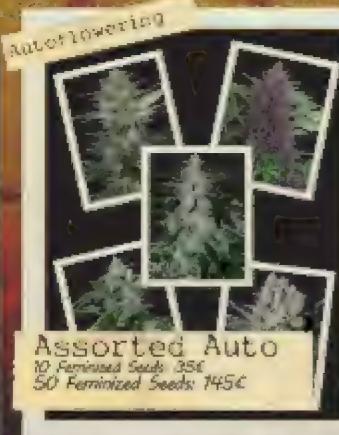
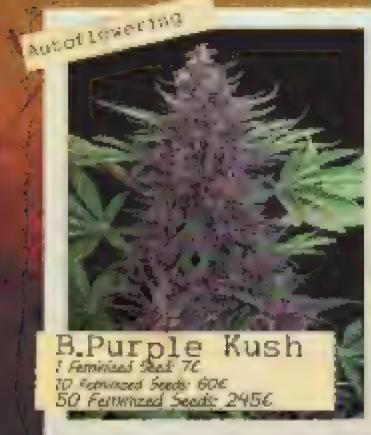
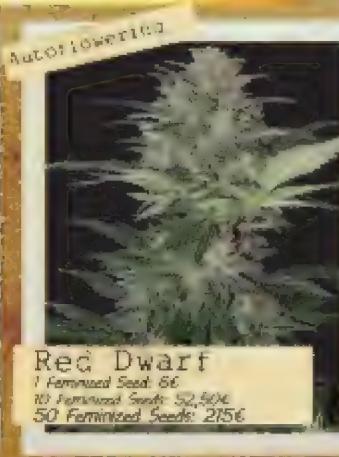
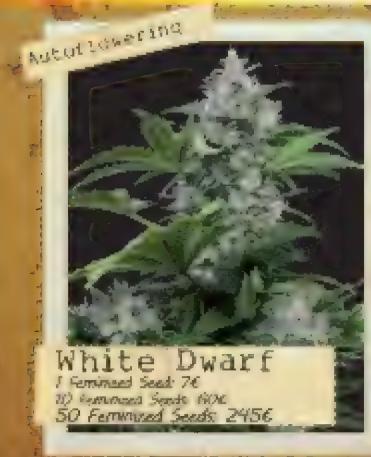


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occurred on March 3, 2003, when law enforcement was called to a disturbance near the Oakville residence of a policeman named Tom Zeigler. Upon inspection of his Nissan Pathfinder, the cops discovered fellow St. Louis County police officer Patricia March bleeding profusely from a wound inflicted by a .40-caliber bullet from Tom Zeigler's Glock, which had been fired at point-blank range into her face, obliterating her left eye and nicking part of her brain. Zeigler and March, it turned out, had been dating for about three weeks.

Remarkably, Patricia March was still conscious and speaking, albeit incoherently.

Upon questioning by the police, Zeigler—who, at 5:23 a.m., had been found at the scene in his sweatpants, drunk and holding a towel to his fellow officer's wound—was vague on details. After obtaining a warrant to search the Pathfinder, investigators discovered empty beer bottles, crack and marijuana pipes. They also found a bag labeled "Police Officer of the Month," that contained 1.64 grams of cocaine and nearly a quarter-ounce of pot.

One assumes that the religious Zeigler embraced Jesus and His anti-drug

message sometime subsequent to that night.

When Zeigler's supervisor, Sgt. Robert Shelvey, arrived and inquired into the whereabouts of the gun, Zeigler led him into his apartment, where it was found in a fanny pack on the floor. Entering the bedroom, Shelvey discovered a blood-

They also found a bag labeled "Police Officer of the Month," that contained 1.64 grams of cocaine and nearly a quarter-ounce of pot.

stained bedroll and evidence of blood on one of the walls. Since Officer March had been shot in the Pathfinder, the scene offered more questions than answers.

Unfortunately for Sergeant Shelvey, Tom Zeigler's apartment was not equipped with a Surveillance Fuzzy Cam®, which might have shed light on the circumstances. Patricia March later testified that, while she was in a blackout state, Tom Zeigler had brutalized her

sexually before the shooting, slashing her with a razor and carving the initials "TZ" into her abdomen.

For his part, Zeigler gave several accounts of the shooting that night before settling on a scenario in which March grabbed the gun from the backseat and shot herself in the face. Despite his obvious drunkenness and the fact that a bullet from his gun had been fired into a fellow officer, Zeigler was never tested for alcohol. March's blood-alcohol content was determined to be .349 percent.

Let's put that number in perspective. When Mel Gibson, director of *The Passion of the Christ*, was pulled over for driving under the influence in Malibu and informed a Jewish cop that "Jews are responsible for all the wars in the world," he registered .12 percent on a breathalyzer test. Then there's country star Randy Travis, who, having been found drunk, naked and bleeding in the road after crashing his Trans Am in Tioga, TX, threatened to kill the state troopers who arrested him. On that fateful night, which produced one of the most memorable celebrity mug shots in history, the 53-year-old country star's score topped out at .21 percent. And at the time of her death from alcohol poisoning, singer Amy



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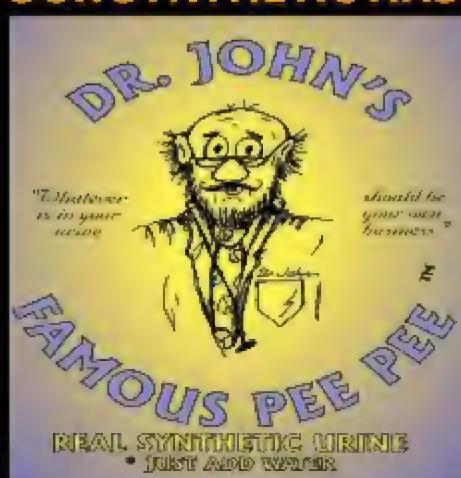
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Winehouse's blood-alcohol content was .4 percent—just .051 percent higher, or one strong drink more, than Patricia March's level on the night of the shooting.

Most likely March's state of intoxication means she was incapable of consenting to sex, let alone shooting herself. She believes that Zeigler slipped her a date-rape drug, and that she was drinking and/or plied with alcohol while she was under its influence. When she was finally able to tell her story, March claimed that Zeigler—who had filed for divorce from his wife the same week—shot her after she attempted to break up with him.

In the end, what punishment was meted out to the perpetrator by the halls of justice in St. Louis? Convicted of second-degree assault, felony possession of cocaine and misdemeanor possession of weed, Tom Zeigler was sentenced to three months for the coke, and fined \$500 for the weed and another \$5,000 for the bullet he fired into Patricia March's skull.

Cyber Warfare

"We simply said it was against the idea of being clean and sober-minded and treating your body as a temple to the Holy Spirit. I guess Mr. Moyer, who is a

Tom Zeigler was sentenced to three months for the coke, and fined \$500 for the weed and another \$5,000 for the bullet he fired into Patricia March's skull.

devout atheist, took serious offense to our religious standings."

Such was Tom Zeigler's reply when a reporter from the *Huffington Post* picked up on the saga of Shawn Moyer and his two dogs' exile from Pack Leader, Plus. Zeigler, at this point, must have been wondering how in the world he'd gotten into this mess.

"Currently all the drug supporters are bombing our Pack Page with disgusting drug stuff and attacking our Christian beliefs," he posted on the Facebook page that he and his wife share. Someone had created a nearly identical Facebook page entitled "Pack Leader, Plus (unofficial)," which carried the Pack Leader address and phone number, negative Yelp reviews, pictures culled from the Zeiglers' own Facebook page that showed

them drinking alcohol at various events, and links to all of the articles concerning the Moyer/Zeigler bitchfight as well as Tom Zeigler's arrest and prosecution for shooting Patricia March. For good measure, there was a link to a *High Times* article regarding the benefits of medical marijuana.

On his real Facebook page, Tom Zeigler expressed dismay that "something from over a decade ago" had been dredged up in the kerfuffle. "Only a handful of people know the truth about that particular incident," he added, "and I was taking a stand against corruption at the time and it was used against me and I lost everything."

One person who definitely knows "the truth about that particular incident" is Patricia March herself. After tracking her down on Twitter, I asked her if it was at all possible that, as he suggests, Tom Zeigler had gone rogue, Bruce Willis style, in some kind of lone-wolf campaign to clean up the St. Louis police.

"Oh, hell no," March replied. She said she'd suspected Zeigler of being a dirty cop before the shooting, including planting drugs on suspects. That, and an incident in which Zeigler punched her in the face, convinced her to break off the affair.

"He said something to me one time

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about if he would ever get dragged into the station and questioned," she explained, "or if Internal Affairs would get involved, if I would please get the 'Police Officer of the Month' bag from the back of his Pathfinder. I started catching on."

It has been a nightmarish 11 years for Patricia March. No one believed she would survive the shooting, and she was given last rites three times during the 14-hour operation that followed. It has taken numerous surgeries to restore her face. Shrapnel was removed, a glass eye implanted. Bullet and bone fragments remain in her brain. On September 10, 2008, the St. Louis County Police fired her for having sex while on duty with Zeigler in 2003, before the shooting. Suffering from post-traumatic stress disorder and agoraphobia, Patricia March remains "deathly terrified" of Tom Zeigler to this day.

"I'm just waiting for the hammer to drop when he does something worse," she said.

Dog vs. Troll

After reading the links that the mysterious "Emma" sent me bringing this story to my attention, I emailed her back and was sent several more—along with Shawn Moyer's email address.

When I asked Moyer what the real story was here—aside from a pretty shady ex-cop refusing to walk his dog because of a Facebook post—he replied: "The way I see it, this is about a sort of ongoing culture war in the US, the religious right and other folks who don't want to believe in 'live and let live' versus, well, everyone else."

After talking to Moyer, I messaged the "Pack Leaders, Plus (unofficial)" page on Facebook asking for an email contact for Tom Zeigler, and was sent Brooke's email address almost immediately. (Tom Zeigler did not respond to an interview request.) Curious as to who was behind the phony



Suffering from post-traumatic stress disorder and agoraphobia, Patricia March remains "deathly terrified" of Tom Zeigler to this day.

Pack Leaders page, I asked the person on the other end for their name. Perhaps I shouldn't have been surprised by the answer: "This is Shawn [Moyer] but there are 4 people with admin to this page.

Plausible deniability."

If it was, in fact, Moyer, it would seem that the moral high ground he'd staked out in the press wasn't enough: He felt the need to plant a flag in the murkier territories of social media as well. In the nanocosm of St. Louis pet-care circles, perhaps he did strike a blow for freedom of expression—but the "drug supporters" who saw reason to wade into this fight on his side ended up being duped by a troll.

Bogey and Bacall's master wants all the pro-pot folks who rallied to his cause to know that he is grateful for their help in swinging fortune his way. On *Marijuana.com*, in the comments section beneath a story denouncing the "weed racism" that the Moyers and their dogs were subjected to, a comment under the name "Whacked-Out Girls Scout Dope Fiends" reads:

Thanks for the support, y'all. After the article came out we had a ton of offers to take care of our dogs, even for free, from folks willing to travel to Saint Louis from all over the country.

In the end, this story has an unsavory conclusion, since there is no real justice here. Having given voice to his indignation, Shawn Moyer is free to vacation again without worry, knowing that there are legions of supporters who will pamper Bogey and Bacall in his absence. Tom Zeigler, who paid the princely sum of \$5,000 to shoot a woman's eye out, continues to serve the public, albeit in a diminished capacity, clipping the hair and toenails of dogs. And the person who suffered the most by far—Patricia March—spends her days afraid to leave her home, lest she be targeted anew by the unknowable evils that lurk outside her door. *

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INTERVIEW BY
JASON HARRIS
PHOTOS BY CHAD BOUTIN

BOB SNODGRASS

THE HIGH TIMES INTERVIEW



ALL HIM THE "GODFATHER OF GLASS." MOST SERIOUS GLASSBLOWERS SPEAK IN REVERENTIAL TONES OF BOB SNODGRASS, THE LEGENDARY GLASS ARTIST WHO PIONEERED NEW TECHNIQUES AND DEVISED A HOST OF MODERN GLASSBLOWING TOOLS.

BOB'S INNOVATIONS LAUNCHED THE MODERN PIPE MOVEMENT, AND MANY ARTISTS CITE HIM AS THEIR INSPIRATION. HE HAD PLAYED AROUND WITH GLASS IN THE PAST, BUT MOSTLY DABBLED IN WOODWORKING AS HIS CREATIVE OUTLET. BOB SAYS IT WASN'T UNTIL 1981 THAT HE BEGAN TO CONCENTRATE SERIOUSLY ON GLASS ART.

IN THE STUDIO, HE DISCOVERED THAT SILVER AND GOLD SPRAYED INTO HARD GLASS WOULD CHANGE COLORS WHEN THE BACK WAS BLACKENED. "I'M AN INVENTOR," BOB SAYS. "I GOT STUCK IN GLASSBLOWING BECAUSE THERE ARE SO MANY THINGS TO INVENT IN IT. I INVENTED A NEW FIELD IN GLASS—THE GLASS I WORK WITH IS ACTUALLY A SPINOFF OF SCIENTIFIC GLASS. IN THAT PROCESS, I FOUND THAT SILVER AND GOLD COULD BE BLENDED AND SPRAYED INTO THE GLASS. A NEW TECHNIQUE OF SPRAYING METALS INTO GLASS CHANGED THE PARAMETERS OF COLOR POSSIBILITIES."

FORGET WOOD AND METAL: THE CANNABIS COMMUNITY WAS SMITTEN WITH THE COLORFUL NEW GLASS PIPES, AND A THRIVING MARKETPLACE WAS BORN. BUT MORE IMPORTANTLY, A NEW COMMUNITY OF ARTISTS SET TO WORK BRINGING INTO EXISTENCE ANY WHIM THAT FLITTED THROUGH THEIR BRAINS—OFTEN IN JAW-DROPPING GLASS DETAIL.

BOB HAS TAKEN ON MANY APPRENTICES. HE'S NEVER WANTED TO KEEP THE SECRETS OF THE CRAFT TO HIMSELF, AND HE ENJOYS A HUGE EXTENDED FAMILY OF GLASSBLOWERS. FOR THIS INTERVIEW, ONE OF HIS FORMER STUDENTS CAUGHT UP WITH HIM AT HIS SURPRISE BIRTHDAY PARTY. WITH SIGNATURE MODESTY, BOB GAVE US A GLIMPSE INTO HIS WORLD OF GLASS.

Tell us how you got to where you're at right now.

Should I go back to before kindergarten, when my mom called me her "little artist" who did glass bubbles with an alcohol lamp from a Gilbert Chemistry Set?

As far as you want to go.

In our freshman year, we learned how to bend small-millimeter rods and tubing in a Bunsen burner. When the chemistry teacher left the room, we would roast marshmallows on glass-string rods.

Where was this?

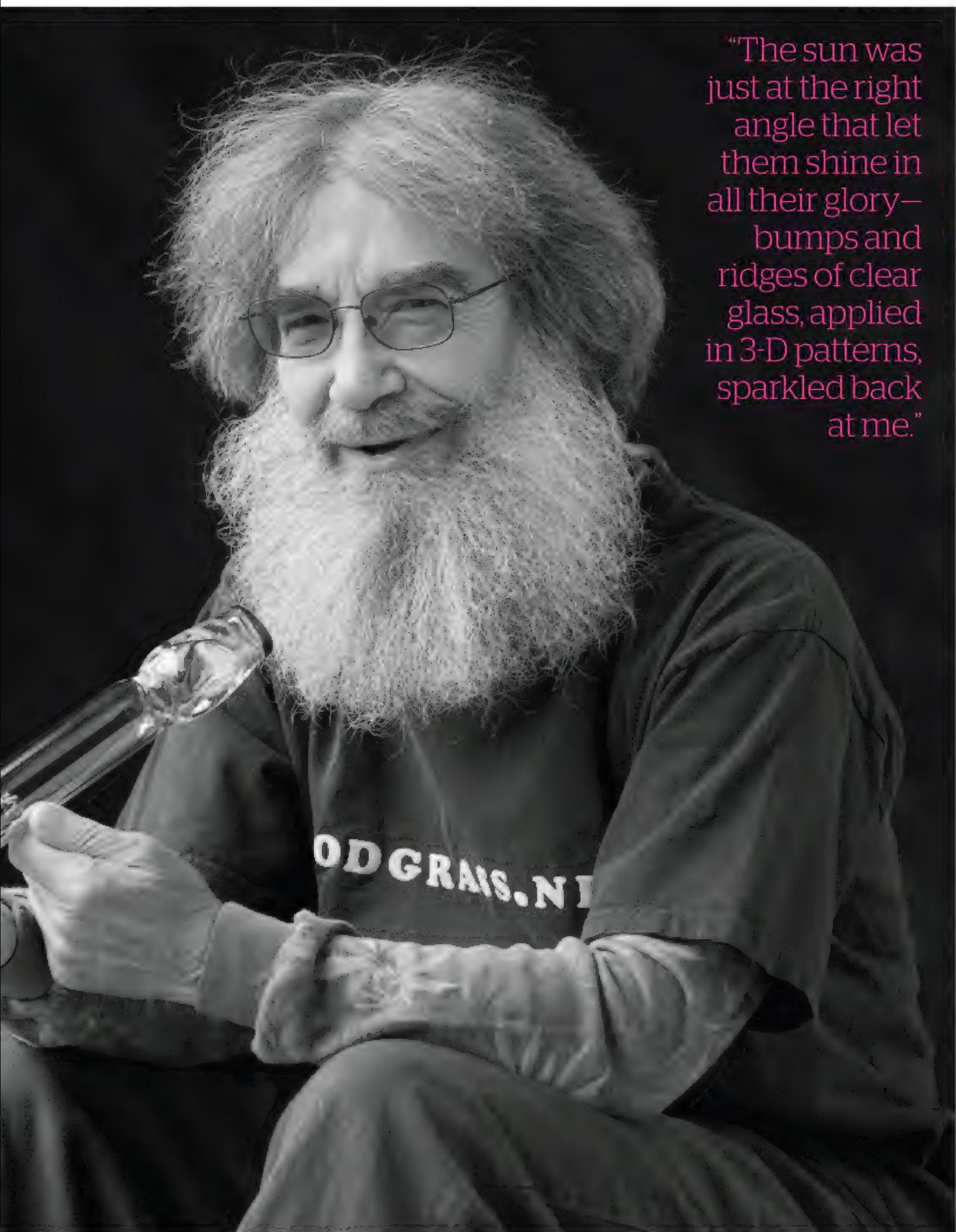
Ohio ... way, way long ago. What was I doing when I really entered into glass as part of my life? I guess I was working a straight day job and trying to find the artist inside. By night, my wife and I had a candle factory in our kitchen and sold candles to local stores. One Memorial Day, Marie and I took off and hitchhiked down to Tennessee from Akron, just to see how they made their candles. My day job was at a gasket-and-shim company.

Some days, I ran a punch press. Most days, I operated a heat-treatment unit. I'd heat copper rings and soften the copper for stretching. I also cast a lot of small lead pieces into brass laminates and ran a surface grinder. Some of the copper filings I made with that grinder were less than a hundred-thousandth of an inch—like liquid. My friend Chuck had been working part-time burning glass, blending it into the clear glass. We thought we were going to make something like

goldstone. No goldstone here. But we did produce red glass rods. We were excited.

Then we started to run out of propane. The color of the rod went from an opaque red to a transparent green. That was our first blast mystery. We later learned that the chemistry of the flame caused a violent swing in the copper, changing how the glass and copper bonded. This type of experimentation later led me to create a small palette of color that I would use as highlights for my glass. That was probably what led me from working in a machine





"The sun was just at the right angle that let them shine in all their glory—bumps and ridges of clear glass, applied in 3-D patterns, sparkled back at me."

shop to working part-time with Chuck—and onward from there.

Was there one revelation that convinced you to change careers and move into glass?

When I first saw glass pipes, I'd been smoking herb about a year. I remember looking in a basement shop window in Akron in 1971. The sun was just at the right angle that let them shine in all their glory—bumps and ridges of clear glass, applied in 3-D patterns, sparkled back at me. Down the steps and in I went. A fellow with a beret sat at a torch, working. He said he'd be with me in a minute. I said, "Wait—I want to see what you're up to."

I introduced myself, and he told me most cats called him Chuck Murphy.

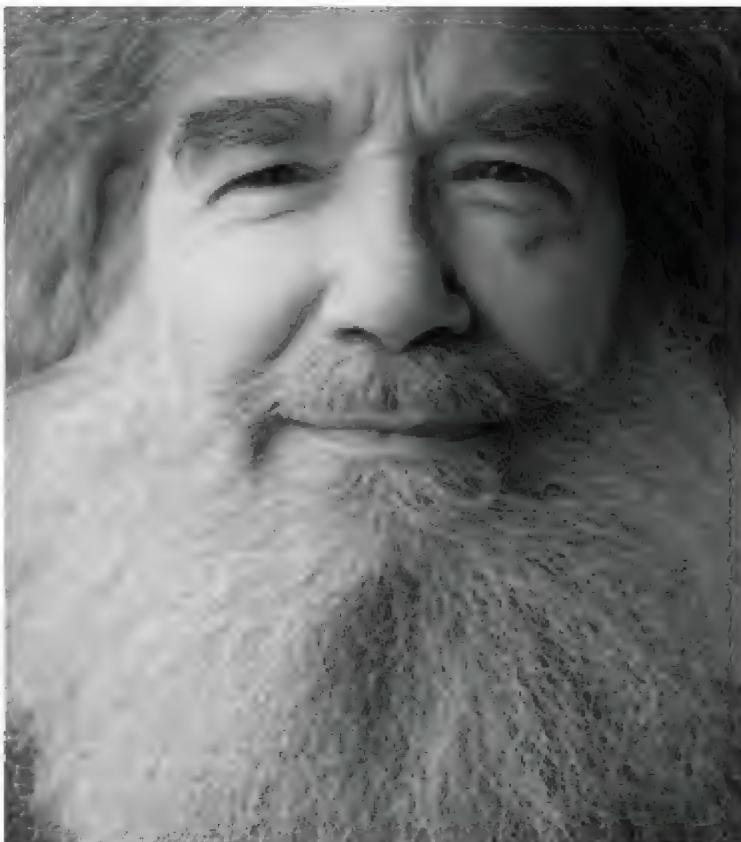
I asked him if he wanted to smoke a doobie ... found out we had a lot in common. Soon I was stopping in the shop on my way home from my regular job. I put some of my candles on consignment in Chuck's shop. One day, he said he was planning a wholesale trip to Youngstown and Pittsburgh and asked if I wanted to take my candles along. From there, we were out every weekend. We hit cities like Ann Arbor, Lansing, Detroit, Columbus, Dayton, Cincinnati—and, of course, Akron, Cleveland and Toledo. We got around.

Then Chuck said, "You know where the shops are. How about *you* take the glass next time?"

Wasn't very long before I came back with the biggest order Chuck ever had. Next day, when I showed up, he told me, "Orders like this aren't easy." We walked into the shop, and two torches were set up. When he lit my torch the first time, this is what Chuck said: "Fire burns and glass cuts."

You do realize you're a legend to thousands of people?

I don't think I'd go that far. I've maybe demoed in front of



"I've always believed in sharing information. Some of that openness has rubbed off on the people in the field."

thousands, but probably only a few hundred people have come to my studio or taken a class from me in some other situation.

Is there anything that's annoying or frustrating to you in the glass industry?

I don't really see it as a "glass industry"—I kind of see it more like the "trade-show industry," the "smoke-shop industry." The smoke-shop industry has created a field where I and thousands of individual glassblowers can work. Some glassblowers work in shops small and large; some work in workshop mills, never getting to do experiments. Many just work in their own space, maybe with a friend or two, producing whatever they can create a market for.

Do you think Americans are still superior pipe-makers?

American art *is* superior, but I've always believed in

sharing information. Some of that openness has rubbed off on the people in the field. Sometimes the openness or sharing of an idea helps create a larger idea. Now there are glass shows and competitions in cities all around North America.

Here in Eugene, OR, we have a glass school and several co-op studios that teach classes. Cornerstone Glass hosts several events. We've got Glass Stock. There's the American Scientific Glassblowers Society—their annual convention is going to be here.

With all these events, we end up sharing a lot more. I remember one time, at a world competition in Vegas, one team ran short of material. A competitor—yeah, a competitor—gave them the needed glass. I was sitting with a friend of ours, a fifth-generation glassblowing lamp worker. He said, "You'd never see that in Europe."

Does the fact that glass pipes are illegal bother you?

That's not my job, of course. I've felt concern. I hope that the legislation catches up and takes archaic laws off the books, and that we can move in a proper direction toward lining up with the cannabis legalities.

Cannabis may become legal in Oregon this November, but glass pipes still wouldn't be.

I hope it's like the "blue laws" back east: Their time runs out and you take them off the books forever without having to go through legislation.

Uncolored glass has been a popular movement since about 2005. What do you think about it?

The uncolored movement resembles scientific apparatus, where you work at procedure and do the least distortion to a piece as possible. You can produce pieces with really clean lines and a crisp appearance. But I'm kind of a flowers guy. I *work* glass—I make it multi-glitter. I include glitters of silver and gold, reduce it to a molten glob and work on the edge of out-of-control—and then restore the shape to something I like.

That's what everybody loves about your style.

I don't plan to change my style for a better trend.

As an artist, is there a stigma because you're the guy making pipes used for pot?

Stigmas come and go. It doesn't really hurt or interrupt me.

Which artists impress you right now?

Too many of them—it's an overwhelming question. I think we've already become too big a field for anybody to say "This is the coolest" or "This is the greatest" right now ... unless somebody comes out with glass that walks and talks for you. There

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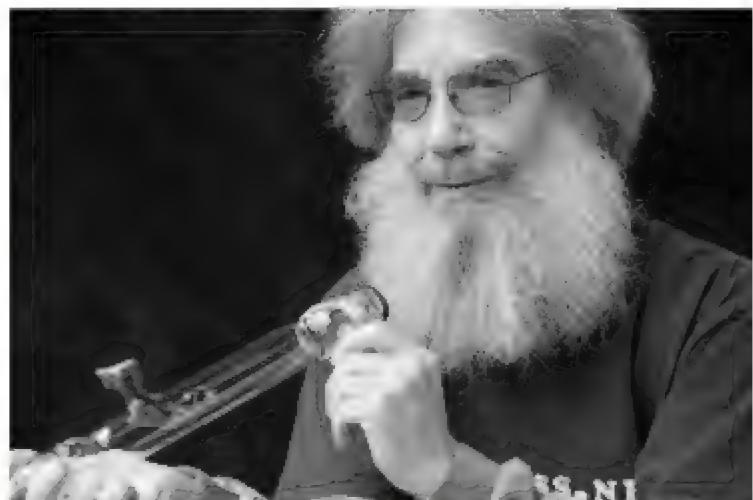
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Bob has embraced the word: "co-oper-tition."

are good artists on both coasts. The Northwest seems to pull a lot more, though. From Bellingham—shoot!—from Smokey Point down, I've been to studios and ... I'm just really hard-pressed to say what's the best or who's the best. Everybody's got a little edge.

There's a lot of beautiful work out there. Be your own judge—I don't want to judge for somebody.

What bit of advice would you like to pass on to the entire smoking culture?

Oh ... tilt your pipe 90 degrees; the flame should go straight up. Turn the pipe sideways—that would be good.

As far as artists who are starting out, read a few books, take a couple classes from people they think are really good, and be patient. Make quality work; don't try to "produce." Let it flow, let it flow—make a product that matches your skills, and your skills will improve; the more complicated pieces will come along. Like playing a musical instrument—the more you practice, the better you get. At least you hope so.

What do you think your legacy will be?

Here's a new word I heard on television: *co-oper-tition*. That's a good one. The more we cooperate, the more we compete, the better we're

going to produce things. So co-oper-tition! That's my legacy.

There was a story you told years ago about why and how these pipes come out of you. You said maybe you're channeling them, that maybe they could be used as the key to a spaceship.

I did say that. Sometimes I feel like I'm channeling energy and I'm producing the keys to the spaceship. Isn't that cool?

Tell us how you became a teacher.

After stumbling on fuming, I researched and found no mention of it in any of the references I could find. Here I was, fuming and adding layers of clear glass and melting it down and building it up and melting it down and producing pictures with lines and dots and precious metals. And this new style produced beautiful effects—especially when you smoked out of it; it appeared to change the color of the glass. I was truly impressed. I said to myself, "This technique will raise the bar on lampworking." And that's when I decided to learn all I could and teach. Over the years, I've taken classes on health and safety, equipment, even speech classes, to better impart what I know in this field to whoever I'm teaching. That's it. 



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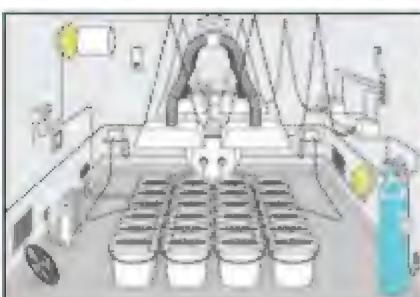
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Using trellises to get the most out of your grow.
Story & Photos by Nico Escondido



Trellising 101

After writing at length about the myriad grow systems (see p. 64) available on the market today, I figured I'd throw out a more advanced concept to aid you in maximizing your system of choice. Trellising is an excellent cultivation technique that not only helps to develop strong, healthy plants but can also increase your yields significantly. This can be a huge plus for indoor or home growers dealing with limited space and/or plant counts, who'd like to make it from one harvest to the next without having to hit the road to find some extra stash.

Simply put, trellising relies on a system of latticework that supports and directs growth in a manner that allows plants to deliver on their potential. The support comes directly from the physical framework of the trellis, while the direction comes from you, the grower.

The latticework can take on many forms. Some trellising works vertically, while others work horizontally. Vertical trellising most often uses a solid frame of wood, metal or bamboo rods with interconnecting pieces that run horizontally



From top: An indoor net-trellis system covering the entire garden canopy; vertical trellising in an outdoor garden using 4" square steel mesh placed around each plant during vegetation.

around and through the framing. These horizontal connections may be solid, or they may be made of softer material, such as strings or wiring. Vertical trellising is generally installed at each individual plant site and must be done in the early stages of growth so as not to interfere with plant or root development later on.

Horizontal trellises usually have a much softer feel and can be used in gardens ranging from just a few plants to large-scale grow operations. Horizontal trellises require some vertical support, which can come in the form of walls, poles at the garden corners, or even suspension from a ceiling. Most horizontal

trellises use netting or wide-hole screens that are installed over the garden canopy when the plants are still in their vegetative stage, allowing them to grow up through the lattices.

Whether you're going the vertical or horizontal route, once the trellis is constructed, the rest of the process will be the same. As plants grow, their branches are pulled through the trellis to train the plant to grow in the desired direction. The goal is to separate the branches and thick, lush growth so that light can more easily penetrate the garden canopy. It is also important to deploy smart pruning techniques to aid in plant development. Tricks such as topping or pinching off the plant release excess hormones that result in additional lower shoots developing directly under the cut. These new shoots usually grow quite vigorously and can benefit enormously from trellising.

Stay tuned for next month's column, where we'll dive deeper into pruning techniques, with tips and tricks for increasing yields while maintaining your plants' potential potency. *

Featured Strain of the Month: Blue Dream, 19.03% THC

Blue Dream has been around for a few years now, but her popularity keeps growing as marijuana becomes more mainstream by the day. Aside from winning numerous accolades at our Cannabis Cups, both for flowers and hash (she happens to produce excellent concentrates, by the way), Blue Dream is also a top seller at dispensaries across the US.

Known mostly for her distinctive *sativa* high and overwhelming flavor profile, Blue Dream is a connoisseur's ... well, dream. A *sativa*-dominant hybrid, she's the offspring of Blueberry and Haze parents. Most cannabis cognoscenti believe that Super Silver Haze was the Haze parent, while some maintain that it was Strawberry Cough (which is only half-Haze, but this

argument seems to make sense after smoking Blue Dream, which is fairly reminiscent of the Cough in both flavor and high).

From a grower's standpoint, Blue Dream is a very good yielder and does well in hydroponic grows. She also responds well to "sea of green" (SOG) formats, which some Haze hybrids have trouble with. Organic nutrient programs tend to bring out the best in Blue Dream, both in terms of flavor and potency, as evidenced by the 19 percent THC mark that she hit at the 2012 Los Angeles Cup, in an entry grown by American Organic.



Thanks for reading, everyone, and remember, grow ... and help the world grow, too!



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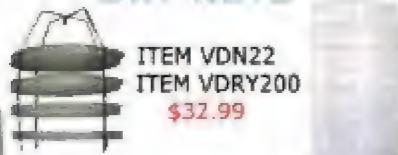


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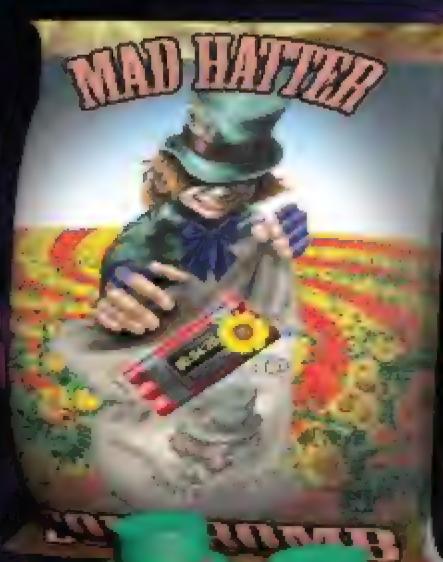
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This close-up of Cloud 9 from Dinafem Seeds shows glandular trichomes that are still mostly clear.



SUBJECT: Ripe for Harvest?

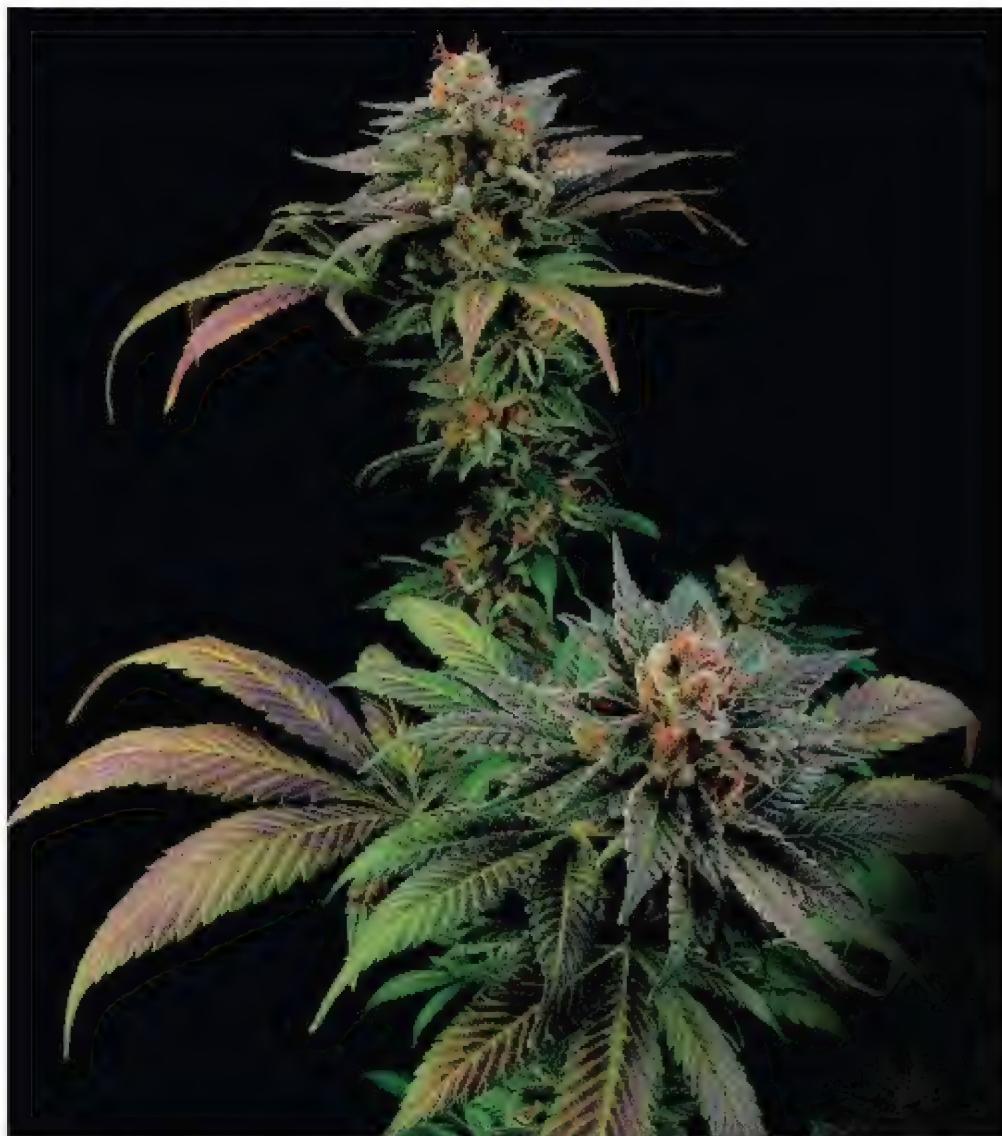
FROM: Kron Burgundy

When checking with a microscope for ripeness, should you check multiple sites on the same plant? Or can you get all the info you need from a nice top cola?

Dear Kron,
It's a good idea to check various parts of the plant if you plan on harvesting all at

once. Because the top buds ripen more quickly, you can clip them off first and then let the lower branches continue to finish flowering. If you can't stagger your harvest this way, use the microscope to examine the glandular trichomes. For most growers, the point when the majority of trichomes have gone from clear to cloudy but have not turned amber is the best time to harvest. However, some growers prefer to let many of the gland heads become amber for a more lethargic, stony effect.

Danko Tip: To avoid mistaking a pH fluctuation for a nutrient deficiency, always check the pH levels of your nutrient solution and growing medium.



Fall colors can be seen as this Blue Widow plant nears harvest.

SUBJECT: Leaf Fade Away
FROM: Terpene Cowboy

I've taken your advice on flushing my plants and have been happy with the results, but I've noticed that the color of the leaves starts to fade and turn lighter, especially in the veins. Aren't these signs of a nutrient deficiency that I should be trying to avoid? Am I going overboard by flushing for a full two weeks?

Dear TC,
It's perfectly normal for your leaves to fade and turn fall colors such as yellow, pink, red and light purple. This is a sign that your flush is working and that you're successfully removing built-up nutrient salts. You're correct that these would be signs of a nutrient deficiency earlier in the plants' life, but the last two weeks of the flowering phase is a time to remove

nutrients, not add them. Your buds will burn and taste better, leaving behind only a wispy white ash. Unflushed pot burns like charcoal, always needs to be relit and leaves a dark, chunky ash.

SUBJECT: Start Me Up
FROM: Michael

Hey, man! I'm looking to start a closet grow. I'm a beginner at growing and was hoping you could give me some tips as to what kind of setup I should use. Here are a few things I would like your opinion on (and if I missed anything important, please let me know): Hydro or soil? Growbox or grow tent? (I can't have any smells leaking out of the closet.) Also, are there any strains that are genetically specific for indoor and/or closet growing? And what should I expect to spend on a good setup? Thanks in advance—I really appreciate the help!

Dear Michael,

My advice to most beginners is to start with soil, or more accurately the kind of soilless mix typically sold in bales or bags. As for containers, 3- to 5-gallon pots will let you raise decent-sized plants that you can hand-water with a nutrient solution. This type of growing is more forgiving for the beginner than the more complicated automated hydroponic systems. Also, if your budget doesn't allow you to purchase a growbox, buy a good grow tent instead: They're much cheaper as well as easy to set up (and take down).

Put a significant amount of your budget toward lighting, airflow and odor control. If you dedicate your funds to these issues now, you won't have to scramble to fix them later. Use a high-intensity discharge (HID) light—a 400- or 600-watt bulb is perfect for a 4' x 4' grow tent—and hang it securely so that you can lower or raise it as your plants grow. Use a vent fan with an activated-charcoal can filter attached, and place a recirculating fan in the tent to keep the air moving.

Start with an *indica*-dominant hybrid that won't stretch out or take forever to flower like some of the *sativas* out there. All in all, your total costs should be less than \$2,000 to get growing now. That may still be a hefty sum for a lot of people, but think of it as an investment in your future, knowing that you'll be producing your own pot for pennies on the dollar—and you'll also know everything that went into it (or onto it).

SUBJECT: Just Say No to Miracle-Gro
FROM: Timothy M.

Is Miracle-Gro a good source of nutrients for my vegetating pants? And should I use 1 gallon of mixed nutes per plant?

Dear TM,
I absolutely wouldn't recommend using Miracle-Gro to grow marijuana (or anything else, for that matter). Not only is it made from chemicals formulated in a laboratory, but the company that produces it—Scotts—has formed a business partnership with Monsanto to sell us Roundup, Ortho and just about any other toxic chemical sludge they can derive. These are also the same people genetically modifying and patenting seeds.

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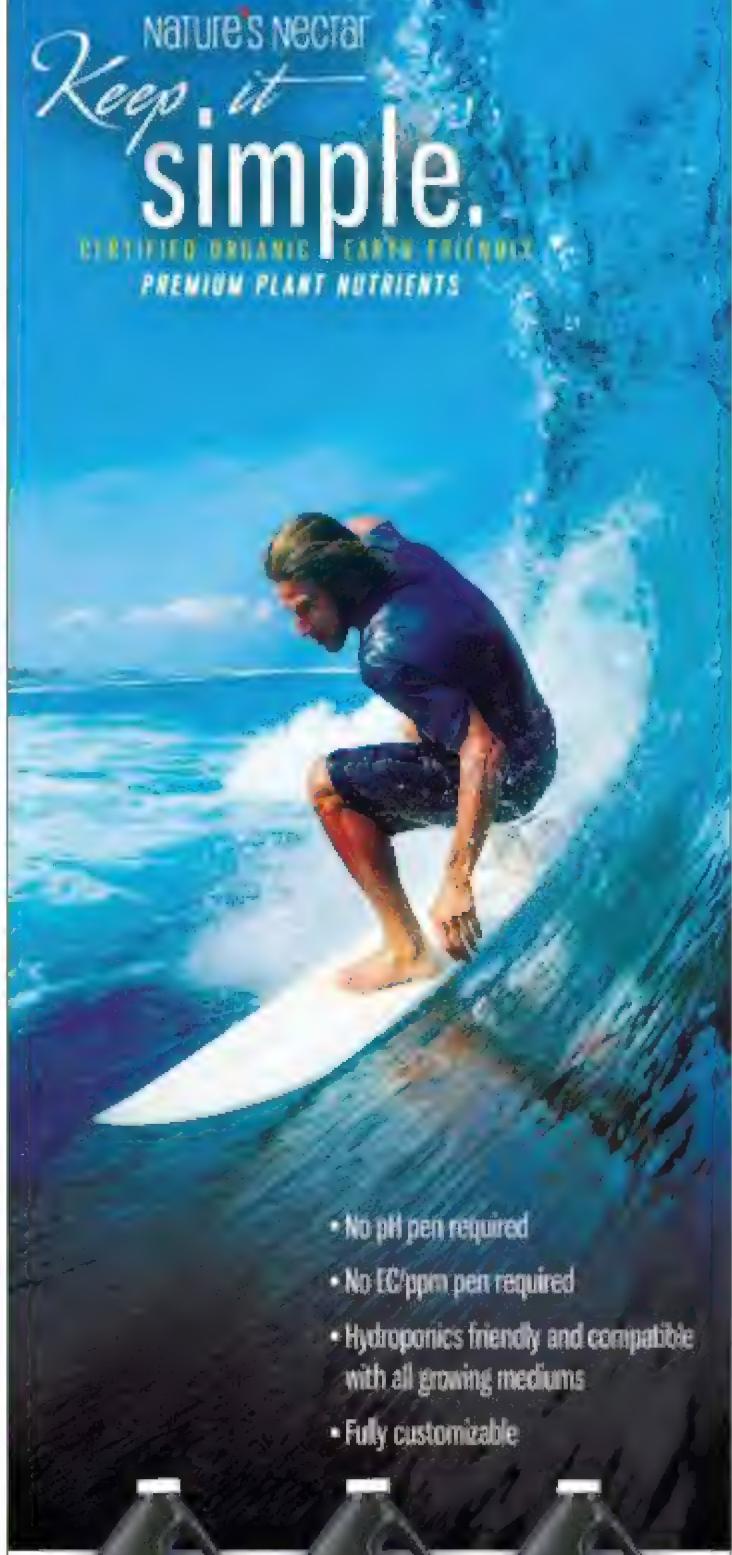
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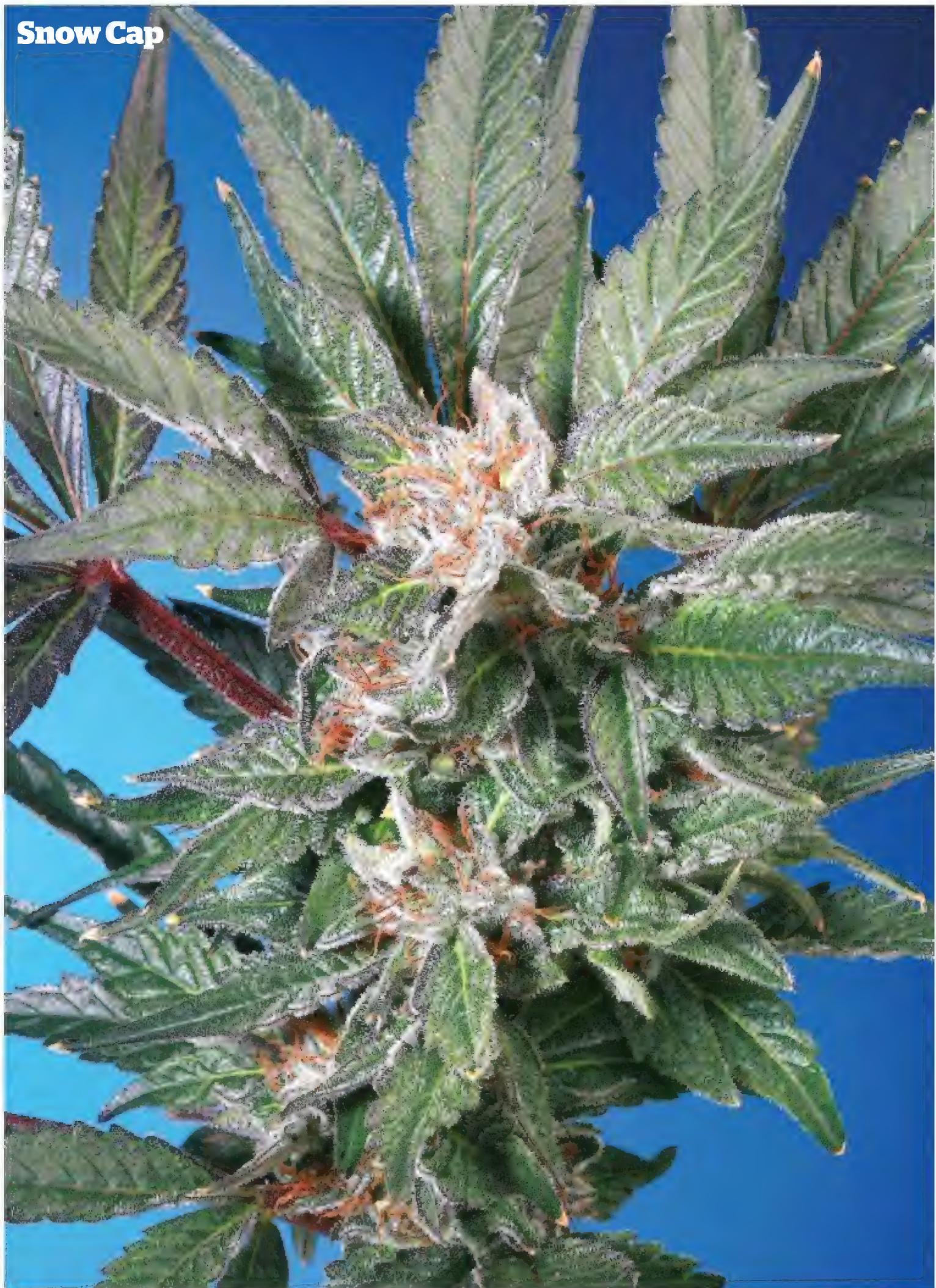


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118 Dear Danko

High Times October 2014

Danko Tip: Take careful notes on all your growing experiences in order to profit from your mistakes as well as successes.



Plants don't need these poisons, and neither does our environment. A Google search is all you need to discover the numerous crimes against humanity and our planet committed by these companies.

Instead, get yourself some nutrients made from natural ingredients, such as kelp (seaweed), bat and seabird guanos, liquid fish, or any of the other plentiful options for feeding your plants a proper diet of healthy food. The closer we get back to nature, the better our pot will taste and burn, and the better off our planet will be as well.

SUBJECT: Feminized or Regular Seeds?

FROM: Jake the Muss

>If you were starting a grow op and had to choose between feminized and regular seeds, which would you choose (and why)? Also, what are the disadvantages of feminized seeds?

Dear Jake,

My preference is always to grow from regular seeds. In my experience, you'll get hardier and more potent plants that way, assuming the seeds have been purchased from a reputable seed bank. If we're talking about a sizable grow op (as opposed to a growbox, tent or closet grow), then you should definitely grow from clones taken from a mother plant that was grown from regular seeds.

The key to achieving this is to grow out plants from regular seeds in order to select a mother plant. To determine the sex of your chosen plants, you must take a clone from each one and then flower the clone. This way, you'll know the sex and traits of each plant's corresponding "parent" without having to flower the potential mother plant herself.

Pick the strongest female from the clones you've flowered and then discard the males and unchosen females. Your vegging female mother plant is now ready to take clones from in order to fill your grow op. The benefits of this method are that the plants will all behave the same way during the grow cycle, with a level canopy that you won't get growing from seeds.

The disadvantages of growing from feminized seeds are

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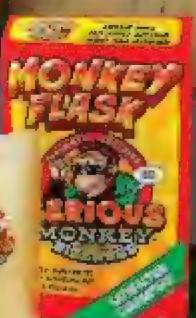
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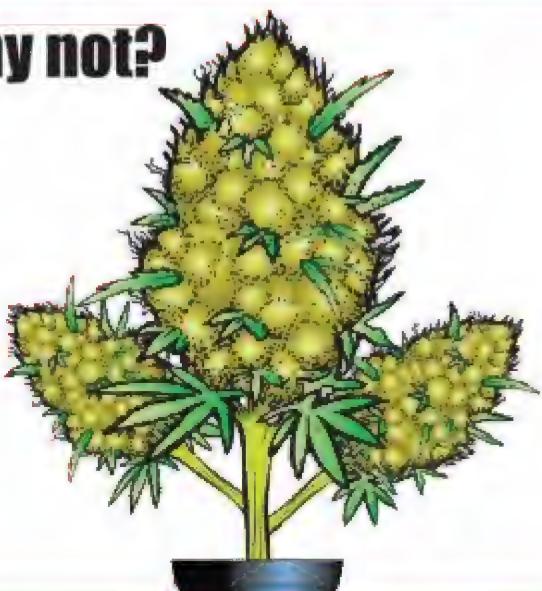
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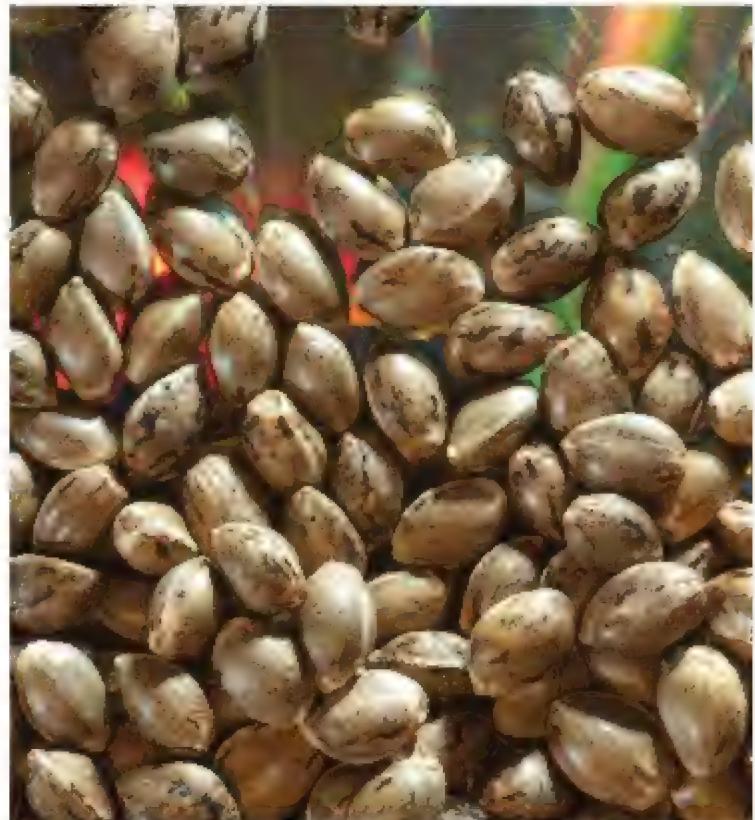
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Danko Tip: Secure a waterproof tarp under your hydroponic reservoir to avoid flooding in case of leaks or pump failures.



Regular seeds are preferable to feminized ones for creating mother plants.

that you can only grow them out once, and the plants lack the vigor of those grown from regular seeds. The big advantage is that you don't have to cull the males, since you're guaranteed females. However, feminized seeds are also more prone to hermaphroditism, so you have to keep a close eye on them.

SUBJECT: Tent Lighting

FROM: Sunikom

• In a 4' x 8' grow tent, would you rather go with 400-watt induction lighting, or 600- or 1,000-watt high-pressure sodium (HPS) lights—and also, how many lights? I recently came across induction lighting. I've read about it on so many forums, but the lights are getting mixed reviews. I'm iffy about them: Some seem to produce and some don't. I want to know the real deal.

Dear Sunikom,

My advice at this stage is to use two 400- or 600-watt HPS lights for a 4' x 8' grow tent. The best I've seen are the Philips ePapillon versions that I recently wrote about in my article "The Indoor Acre" (Aug. '14). As for induction lighting, the quality of the technology is still up for debate. I haven't seen anything to sway me from believing that HID lights such as HPS and MH (metal halide) are the best for growing cannabis indoors.

If you think you can handle the extra heat from the 600-watt lights, then I would certainly go with them over the 400-watt versions, since you'll get bigger buds for sure. You could also place two 1,000-watt lights in there, but you're going to need some serious airflow and cooling to keep from overheating and burning your plants in that enclosed space. ☮

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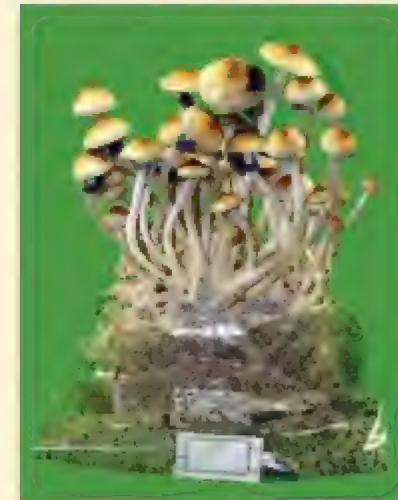
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Are women more sensitive to the plant's effects than men?

Viv LA Difference

Hi Viv,

Generally, yes. In one study, women and men—matched for how much they usually smoked—were given a standard dose in the laboratory. The women gave the plant higher ratings for potency as well as for how much they'd like to use it again. That being said, the women did tend to be smaller in terms of body size, which might have contributed. Nevertheless, especially for women, less might very well be more.



despite silent-screen star Ben F. Wilson's warning that it'll make him go "bughouse loco." Of course, he ends up killing a cowhand as a result. You can catch a clip from it in Ron Mann's documentary *Grass*. Canutt went on to direct the stellar chariot-race sequence in *Ben Hur*.

Why aren't we using hemp to make fuel more often?

Bo String

Hi Bo,

Haven't you heard? Growing hemp is illegal in the US (though these days, a number of states are being allowed to grow it for research purposes). We could make "hempoline" or use it as one of many plants for biodiesel, but given our current laws, it's cheaper to use grains, kitchen waste or seeds.

What's the first flick to show marijuana use?

Jake

Hi Jake,

I'd bet on the 1924 silent film *Notch Number One*, which was re-released as *High on the Range*. In it, legendary stuntman Yakima Canutt smokes a joint after work,

Why don't more people use vaporizers?

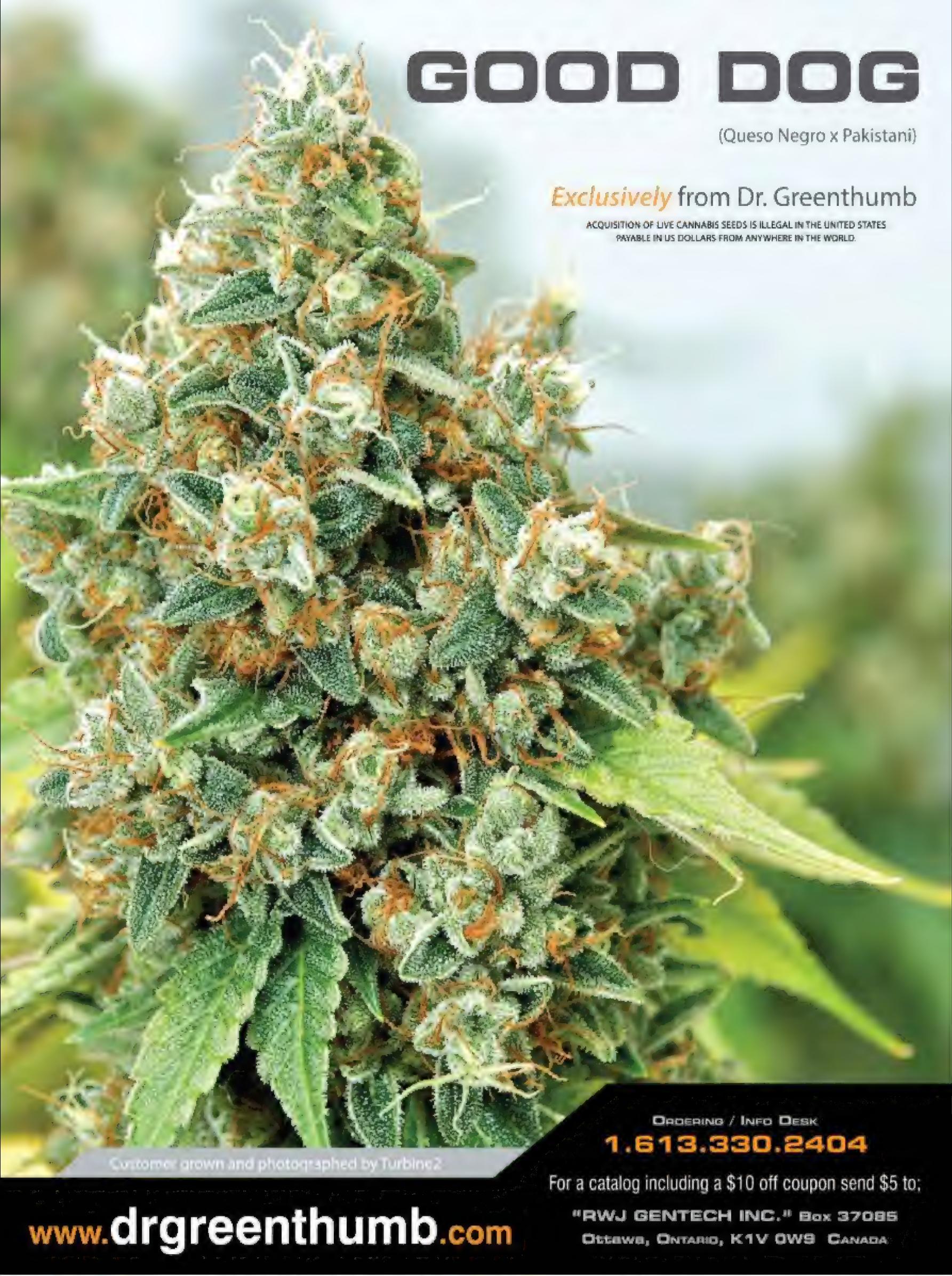
Stan Steamer

Hi Stan,

Research suggests a few common gripes. Some folks think the vaporizer takes too long to warm up or just presents too much trouble to use. As a result, many people who don't have respiratory symptoms like wheezing or coughing don't see a reason to bother. But the new technology sidesteps these problems, and preventing respiratory symptoms *is* a good reason to use these devices.

I also hear complaints about the effects taking longer to kick in. I need to gather some more data on this issue, but is waiting an extra 10 minutes really such a hardship? *

*Dr. Mitch Earleywine, PhD, is a professor of psychology at SUNY Albany and the author of *Understanding Marijuana* and *The Parents' Guide to Marijuana*.*



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What's in a Name?

Let's be specific—and accurate—when we talk about BHO. *By Josh Shipman*

We've all heard the many terms for BHO—shatter, earwax, budder, crumble, taffy, honey oil—and if you've been dabbing for a while now, you probably have your favorite form. Perhaps you prefer earwax or crumble because it's easier to work with. Or maybe shatter is your dab of choice because of its clarity and smooth texture.

While these slang terms have their purpose in the industry, they give consumers only a vague idea of the processes used and the quality of the product in the end. The good news is that BHO extractors are relying on scientific approaches and looking to the essential-oils industry for insights and language to help them produce the highest-quality extracts, and communicate that information to the consumer.

The essential-oils industry has been using solvents in extractions for decades—and as a result, it's created a dictionary of terms that can cross over to the cannabis industry. The three terms I'd like to introduce are *concrete*, *oleoresin* and *absolute*. These terms identify the three types of products most extractors produce.

A concrete is produced from fresh plant material, whereas an oleoresin—the most common type of BHO found on the market—is produced from dry material. An absolute, on the other hand, is created when a concrete or oleoresin is further refined with alcohol, removing unwanted waxes and lipids.

Concretes are a true representation of the original raw material used in the extraction. They're often very harsh, because most of the volatile terpenes have been preserved. An oleoresin is a better representation of the "cured" product, since it's been dried and has lost some of those terpenes,



Is BHO an accurate title for extracts?

while developing others. An absolute is considered the cleanest of the three because the final product has been taken through an extra process to remove waxes, which makes for a more potent and arguably smoother dab. Creating an absolute requires more time and skill, though, so expect to pay more for these extracts.

With the crossover of this language into the cannabis industry, it's been suggested by more than a few producers that BHO (an abbreviation for "butane hash oil") isn't an accurate title for these extracts, since oil is *not* a desirable end product.

Since oleoresins are the most common form of extract being produced, perhaps the name should be updated to "butane hash oleoresin." For those refined, more expensive absolutes, BHA might be a more accurate title as well.

On second thought, maybe not: BHA is the abbreviation for a cancer-causing preservative found in processed foods. *Our* BHA is actually cancer-killing! *

Josh Shipman is Fremont County Cannabis's resident greenhouse grower, specializing in organic horticulture and with a background in writing and research.



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The High Cost of Activism

A family flees police harassment in Texas.

Anyone who's been to the Lone Star State knows that its unofficial motto, "Don't mess with Texas," is no joke—especially to the cops there. But what happens when the law in Texas messes with you? That was the frightening situation faced by my dread-headed activist pal Minister Mike, his lady Shoreline Sheena and their young son this past April after their trip to the U.S. Cannabis Cup in Denver.

The couple had just had the time of their lives and had even gotten engaged at the Cup. But shortly after returning to their hometown of Copperas Cove, two plainclothes officers approached Sheena asking to search their house, claiming they'd heard that the pair had brought marijuana home with them. How did the authorities know they'd just returned from Colorado? Most likely by monitoring their Facebook pages (one of the officers had even attempted to add Sheena as a friend weeks earlier). As an activist and Army veteran, Sheena knew her rights and refused. The police left—but not before threatening to return with a warrant and some agents from Child Protective Services.

Several days later, neighbors reported seeing the police and CPS poking around a shed in Mike and Sheena's yard. According to Mike, these incidents were just the latest in an escalating campaign of harassment. Months earlier, they'd been given an unusually hard time while trying to establish a community vegetable garden in their neighborhood. Initially, they'd encountered no problems and were

close to finalizing the permits. But after officials met them in person and saw their dreadlocks, their permits were suddenly denied. They were even accused of plotting to grow marijuana in the proposed garden.

Realizing that this harassment would only get worse, the couple felt they had no choice but to leave the home that Mike had lived in his entire life. The next day, they loaded whatever they could into their Prius and headed back to Colorado.



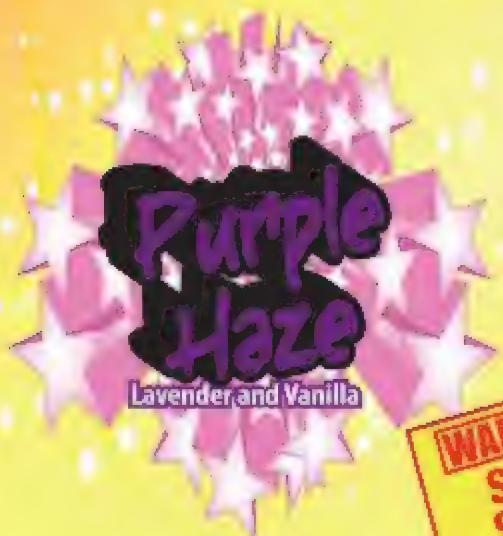
Mike and Sheena represent at the 2014 DFW NORML conference.

Sadly, though, their hardships were just beginning. After arriving in town, their family car was totaled by an uninsured driver who was driving while

talking on her cell phone. Setting his family up at a friend's house, Mike rented a U-Haul and headed back for the rest of their belongings. When he returned to Copperas Cove, he found that his pets (which were being looked after by his mom) had been seized by officers from Animal Control under trumped-up accusations of abuse. Then, as he finished packing, Mike was again visited by the police—this time under the bogus pretense of anonymous reports of domestic violence. After he explained to the officers that he was there alone, they finally left—and so did Mike.

Mike and Sheena are now safely settled in Colorado, where they've gotten married and are rebuilding their lives. Had it not been for the generous donations from fellow activists and friends, they would never have been able to pull off their tumultuous transplant. If you'd like to help, go to gofundme.com/8u5yc. *

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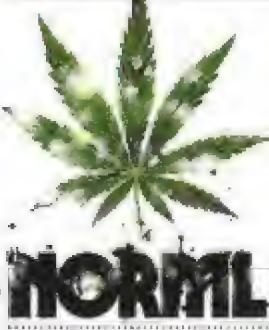
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How Washington Won

Evergreen should inspire us all to take action.

Allen St. Pierre is the executive director of NORML. Visit norml.org.



Rick Steves fires up the crowd in Evergreen.

If there's someone in America who's watched more cannabis-related documentaries than me, I sorely want to meet them. Frankly, most of these have been unwatchable, low-quality polemics. Many others are dated, serviceable only for the brief period of time they were conceived and broadcast. Few are gems for the ages.

I recommend *Evergreen: The Road to Legalization* to all *High Times* readers: It's an outstanding chronicle of Washington State's successful cannabis legalization campaign, worthy of every stoner's home library. The filmmakers enjoyed unfettered access to the behind-the-scenes efforts of the New Approach Washington campaign for nearly a year,

providing the viewer with an enthralling David vs. Goliath narrative: Activists finally win a legalization ballot initiative, and the behemoth of national cannabis prohibition begins to fall.

Alison Holcomb is the central figure in *Evergreen*. She's a NORML legal committee member and heads the criminal-justice department of the Washington State Civil Liberties Union. We see the brilliant organizational and communication skills of the kick-ass staff, but it's Holcomb's stunning ability to assemble a mainstream group of anti-prohibitionists as the face of the "Yes on I-502" campaign that anchors the film (and affirms the need, in my view, for more professional women to lead cannabis-law reform efforts).

Holcomb's two primary public sponsors of the legalization initiative were best-selling travel author and TV host Rick Steves (who also serves on NORML's board of directors) and Seattle City Attorney Peter Holmes—an *actual* sitting city attorney who served as a co-petitioner for the initiative. Holcomb and company quickly picked up major endorsements from politicos like Seattle's mayor, former federal prosecutors and judges, business leaders and the NAACP.

By this point, we all know how the legalization initiatives in Washington and Colorado turned out, but *Evergreen* is far from anticlimactic. The campaign created plenty of drama, but the traditional opponents—law enforcement, religious institutions, alcohol and pharmaceutical interests—didn't provide it. Instead, it was an insular group of medical marijuana vendors (and their lawyers) who sought to maintain a continued monopoly on selling unregulated, untaxed and prohibition-priced cannabis. Thankfully, this self-interested minority held no sway in Washington.

Following passage of the law in November 2012, police and prosecutors statewide halted the arrest and prosecution of cannabis consumers and released hundreds from jail who were awaiting trial for pot "crimes." This summer, Washington joined Colorado in its successful rollout of a retail cannabis industry. *Evergreen* manages to catch it all. ♣

FREEDOM FIGHTER

New York State of Kind

Troy Smit works to make weed part of the Empire State.

After watching many people who were close to him suffer from conditions that could have been treated with medical marijuana, Troy Smit decided to become involved in the fight to reform the marijuana laws in New York State. "I saw the amazing

healing qualities of cannabis through friends and family who have MS, fibromyalgia, breast and brain cancer," Troy says.

"I saw that cannabis was no more dangerous than Advil or Red Bull. Most importantly, I saw that our cannabis policies in New York and the US hurt my friends and my family."

He volunteered with Empire State NORML in 2008 and earned a seat on



the chapter's board of directors. In 2011, Troy founded the Long Island sub-chapter of Empire State NORML and expanded NORML's presence in the region.

Over the six years of his activist career, Troy has met with numerous State Department officials and foreign diplomats through the United Nations International Visitor Leadership Program. The issues associated with our

nation's cannabis policies are often a topic of discussion. Most recently, Troy has been hard at work lobbying New York's elected officials in support of medical marijuana, meeting with dozens of legislators.

And Troy gets down in the trenches, too. He serves as both an organizer and director with the founding chapter of the Global Marijuana March in New York City, one of the oldest pro-pot events in the country.

By Erik Altieri, NORML communications coordinator



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FLOWERS OF THE MONTH

Purple Amazingness

How ya doing? I'm a resident of the Grasscity forums and I've been growing for a little over three years. These plants are from a breeder in Oregon named SG1 who started Sanctuary Gardens. I've grown out a few crosses that he made and they've all turned out really nice. This one is something special though. He crossed The Purps from BC Bud Depot with Ken's Grand Daddy Purps and man, has this plant delivered! *Ironhead*



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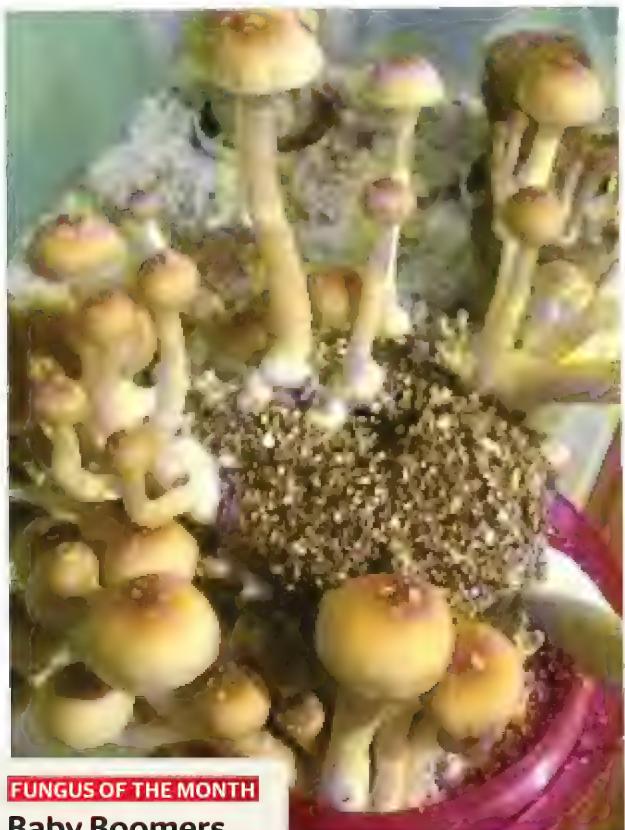
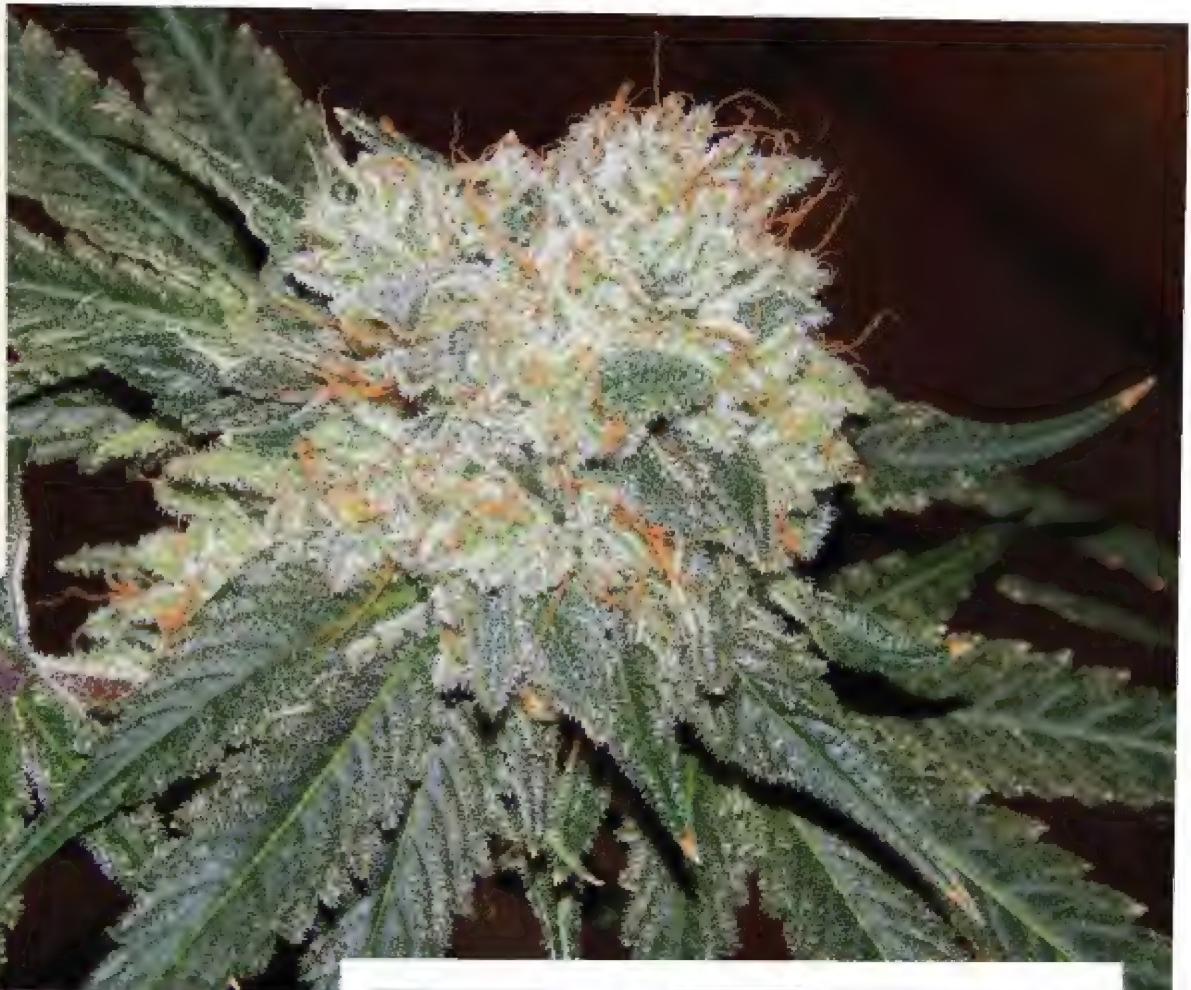
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CLOSE-UP OF THE MONTH**Chemtastic**

 I'm a longtime reader and medically compliant grower in Maine. I wanted to show you my Chem 91 from the Cali Connection. She was vegged for five weeks until she was a bush about 14" tall and fed the entire Advanced Nutrients line. This is from the eight-and-a-half week mark; she will be coming down in less than a week! She smells very sour and has extremely dense flowers. It's obvious the Chem is the mother to the Sour Diesel as you can see the traits from both. She has really surprised me and I now have a lot more respect for the Cali Connection: They're releasing some fire! *Eastcoastarmy*

**FUNGUS OF THE MONTH****Baby Boomers**

 These are some pics of my last crop all grown organic in the Lone Star State. *Eli W.*

**COLA OF THE MONTH****Let it Flo!**

 Here's a pic of our recreational/medical garden. This is Flo x Cookie Dough. *Aakgriffin*

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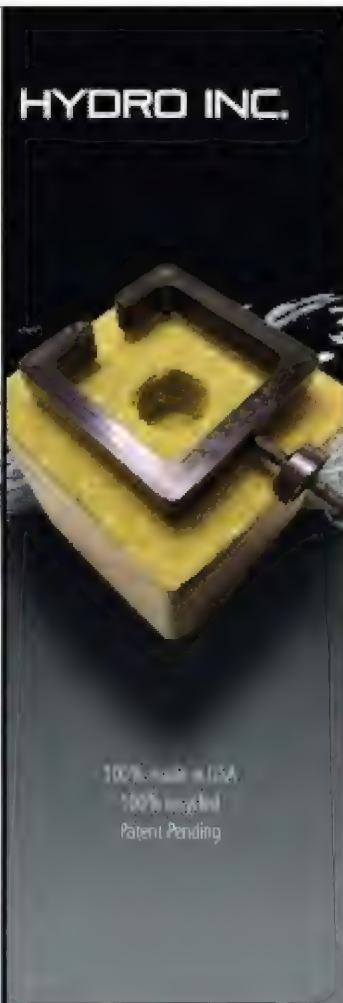
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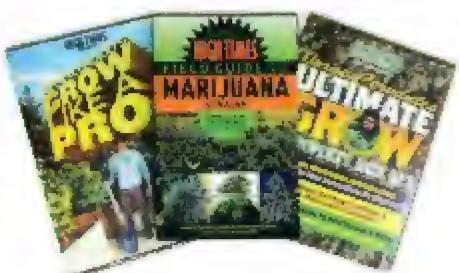
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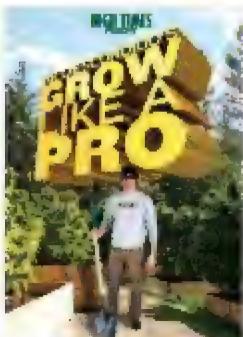
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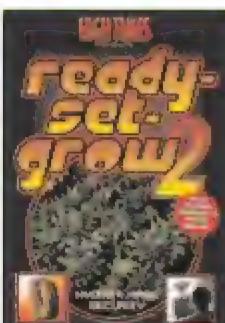
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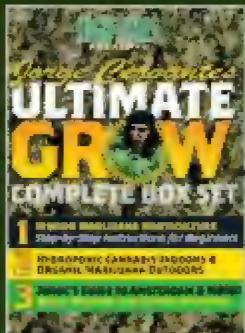
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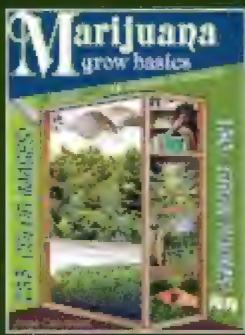
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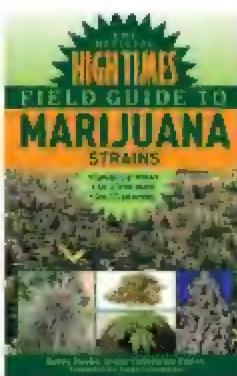


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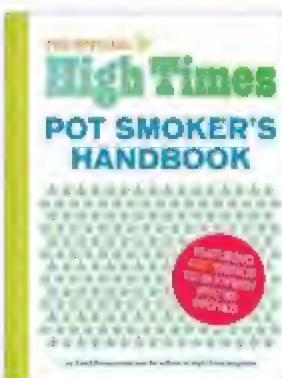


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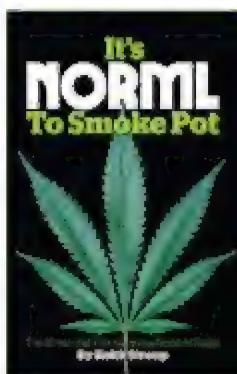
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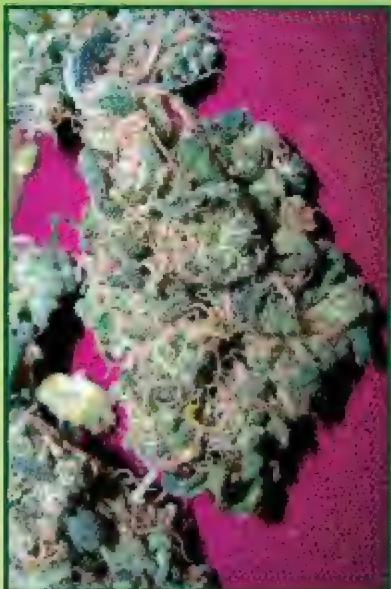
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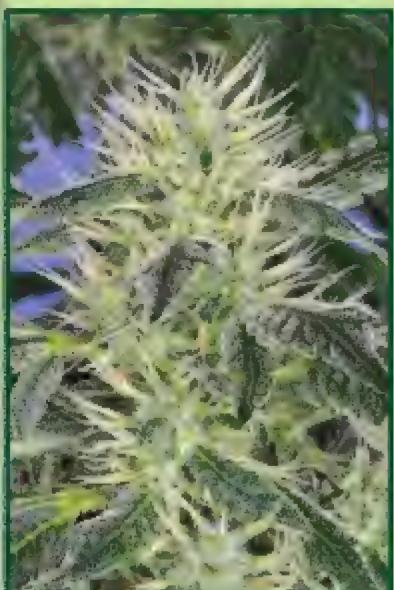
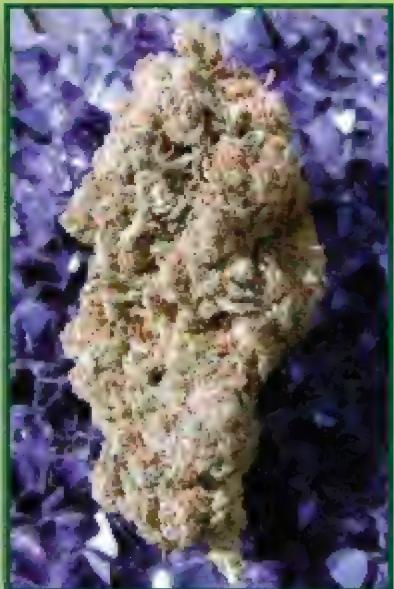
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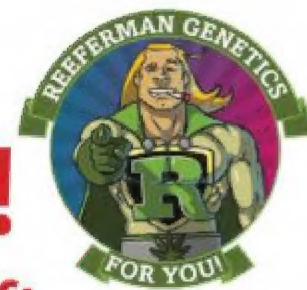
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